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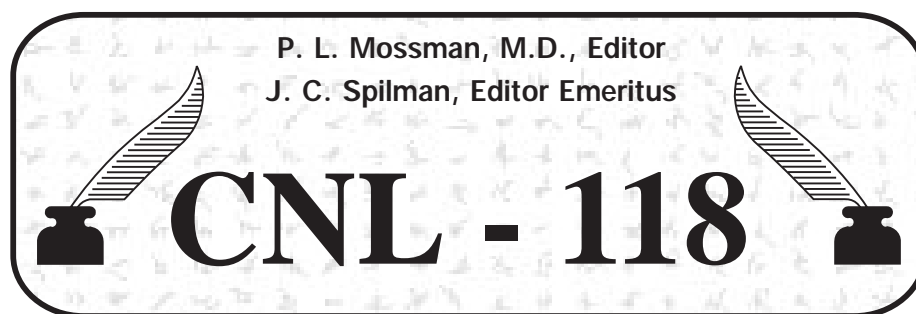
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EDITORIAL

Because it has been the practice of the Editorial Staff of *The Colonial Newsletter* to compose each issue at least two months in advance, we can hardly be considered a source for breaking news coverage from the world's trouble spots; thus CNN has nothing to fear from us. As a result, this editorial is being written just a few days following the events of September 11, 2001. The tragic images from the TV coverage and the eyewitness account posted on the Internet by our young colleague, Eric Cheung, have been indelibly etched in our memories for a lifetime. On the Wednesday night following the attack, the service at our church concluded with the tolling of the bell in tribute to our fallen citizens. Even though they were unknown to us, they were part of us. This put me in mind of John Donne's famous passage,

"Any man's death diminishes me, because I am involved in Mankind; And therefore never send to know for whom the bell tolls; it tolls for thee."

These terrorist acts may forever change or, at best, temporarily incommode many aspects of America as we have known it. Within the numismatic community, a few auctions have been postponed, a building project placed on hold, and many personal plans rescheduled. But in view of the overall enormity of the situation, I believe it is obscene to speak of these minor inconveniences as anything but trivial. But on the other hand we also have a responsibility, and are even encouraged, to continue our normal daily activities so that these criminals will enjoy no success in having disrupted our way of life. Who knows what more may have transpired between the day this is written and when you finally receive your completed issue #118 from your letter carrier. The only thing I can add

at this time is my fervent prayer that God will deliver us from further crimes against humanity no matter where they may occur.

It is with great pleasure that we introduce Mark Sportack to the patrons of *The Colonial Newsletter*. Mark had a prior presentation at the 16th COAC in December 1999 on "The Myths and Mysteries of the Somers' Ilands Hogge Money" where he interpreted the first coinage of British North America. Now, in this current contribution he greatly expands Pridmore's original reference to Bermuda's second coinage, the 1793 Ship's Penny, with a meticulously designed, in-depth study of several newly described die varieties. I'm sure you will appreciate the intensity and quality of his investigation. I must confess I have a vested interest in this 1793 project since I've been acquiring these coppers for many years. This collecting objective was encouraged by the fact that my mother's family has lived in Bermuda ever since these coins were current in the islands. In reading Mark's account, my imagination ran wild as I fantasized how many of these pennies one of my ancestors, who was a master cooper there from 1812 to 1834, might have melted down to forge into copper barrel hoops! Oh well, we can never know, but at least great-great-grandfather William left some for Mark to examine! Read and enjoy.

Our second article is the final and seventh installment in a series on the French Colonies Sou of 1767 by that dean of numismatics, Bob Vlack. The entire manuscript is being repeated in this issue for the convenience of our patrons. In my introductory comments to the article, you will learn how this study, begun in 1961, has unfurled over the years. If you are not aware of it, Bob has continued to write on a variety of subjects.

This issue will conclude my term as editor of *The Colonial Newsletter*. These past five years, since April 1997, have flown by – but don't ask me where! While I'm stepping down I'm not disappearing since I will continue as a Contributing Editor and assist your new editor, Gary Trudgen, wherever he needs me. I assure you that the *CNL* is passing into the very able hands of an extremely versatile individual with multiple

talents as a writer, researcher, genealogist, numismatist, computer whiz, cabinetmaker, and you name it. But as I go further into retirement, I want to thank all my Associate Editors, authors, the American Numismatic Society, and all those many who have helped me during my tenure. However, as my swan song, it would be out of character for me if I didn't add a further word of encouragement to all you aspiring writers and researchers to submit your articles, ideas, comments and suggestions to Gary so that the *CNL* will continue to be a vehicle of exchange of ideas of things numismatic. So without more ado, welcome Gary and thank you everyone!

Philip L. Mossman
"The Editor"
plmossman@aol.com

Bermuda's Copper of 1793: Revisiting Pridmore's Classification System

by

Mark A. Sportack; Easton, PA

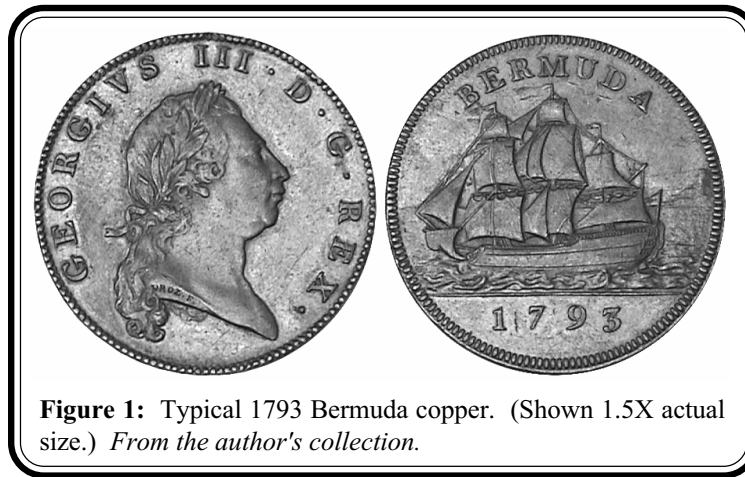


Figure 1: Typical 1793 Bermuda copper. (Shown 1.5X actual size.) *From the author's collection.*

The 1793 Bermuda copper, more commonly known as the "Ship's Penny," is a handsome, well-made, intriguing, and eminently collectible coin. As the only Regal coinage sanctioned for Bermuda during its first 345+ years, it is an interesting one-year type coin. Collectors prize this coin for its appealing designs, scarcity, and collectible original varieties including proofs, as well as a plethora of fantasy pieces.

The coins are a wonderful

tribute to Boulton and Watt, and have increased popular perception of the manufacturing prowess of their Soho Mint. If this weren't reason enough to stimulate numismatic interest, the coin's history also comes complete with fanciful tales of pirates and the loss of a large percentage of newly minted coins at sea.

Major Fred Pridmore, in his work, *The Coins of the British Commonwealth of Nations—Part 3, West Indies*, attempted to identify and classify the various varieties of Bermuda's Ship's Pennies. This work has been the definitive study on die variety attribution in this series and the basis for other proprietary classification systems. His work remains the standard reference for this beautiful British colonial issue. It would be remiss to begin any exploration of 1793 Bermuda copper without first reviewing Pridmore's classification system.

Pridmore's Numbered Classes

Pridmore's classification system, for those not familiar with it, defines the following varieties of Ship's Pennies.

Pridmore 5a – This variety is, perhaps, the most common and easily recognized of Pridmore's attributed varieties and features a double pennant on the mainmast. Unfortunately, Pridmore leaves to one's imagination what a "double pennant" looks like. Quite simply, there are no photographs or illustrations – just this simple description. The 5a variety is also somewhat cryptically described as having "slight cordage differences" when compared with the 5b.

Pridmore then informs his readers this variety is also known with a die crack that runs through the pennant on the mizzenmast. Again, his claim is not supported with either a photograph or illustration. Close inspection of numerous specimens bearing this diagnostic "feature" has revealed that it is not a die crack! The line that runs through the mizzenmast was caused by a clashed die, and exactly matches the contours of George's throat on the obverse.

Pridmore 5b – The 5b variety is sparsely described in Pridmore's book with just two words: "Pennant single." One is left to infer that he is specifically referring to the mainmast pennant. No attempt was made to further enlighten numismatists about the previously mentioned "slight cordage differences" that also distinguish the 5b from the 5a.

Pridmore 5A – This variety is also described with just two words: "A proof." Given this Spartan description of an important variety, one must conclude that Pridmore knew that proofs existed in this issue, but did not have the opportunity to examine any first-hand. Consequently, his readers have no idea whether a Pridmore 5A proof bears a single or double pennant, nor were any other diagnostics identified. One is simply left to assume that original proofs are all 5A's.

These three varieties, all prefixed with the number 5, were deemed to be the only original strikes. Other varieties were presumed to have been later restrikes. Of these purported restrikes, only Pridmore's Variety #6 is worth examining closer, as it so closely resembles both 5a and 5b.

It is important to note that Pridmore also claimed a single specimen was struck in gold; he classified that specimen as his variety #5B. However, he also offered the tandem caveats that it wasn't available for his examination, and that it was likely struck from the same dies as his #6 variety. Given that fantasy pieces, including some fairly authentic-looking ones, were known to have been struck in the second half of the 19th Century in off-metals, including gold, it seems probable that this specimen was, in fact, an off-metal 19th Century fantasy strike. Additional support comes from the lack of evidence found in Matthew Boulton's papers. Boulton was an entrepreneur, and virtually everything he did was driven by a profit motive. No record exists of his having struck any gold specimens of this coin, whereas copious records from the Soho Mint exist that document virtually every other facet of this issue. Thus, one must discount Pridmore's purported 5B gold specimen as a misidentified 19th Century off-metal piece.

Pridmore 6 – This variety must have been troublesome to Pridmore, as he treated it to the most verbose description of any of his numbered varieties. The primary diagnostic is a missing rope at the bow of the ship. The rope, which appears on the other Pridmore varieties, should have run from the bowsprit, across the face of the jib sail, and terminate near the top of the foremast. Pridmore notes that this variety was only known in proof, and specimens "have the characteristics of late Soho strikings before William Taylor got hold of the dies." Frustratingly, Pridmore merely hints at the existence of those characteristics without sharing them with his readers. However, from this sparse description, one can infer that Pridmore believed them to be restrikes based on the missing rope and the preponderance of proofs and that this variety was intended as a deceptive facsimile of an original coin. The extent to which coins of this variety resembled authentic specimens distinguished them from the mules and off-metal fantasy pieces churned out by Taylor. William Taylor was a London-based die-sinker and engraver. He purchased numerous original dies, hubs, and other related items from the Soho Mint, and used those articles to manufacture fanciful reproductions of many different coins, including the 1793 Bermuda copper. Thus, numismatists were led to believe that all Pridmore 6 specimens were proof restrikes made as deceptive facsimiles of the original coins.

Pridmore also established sequence numbers for the various fantasy varieties made by William Taylor and his sons. These curiosities, which he explicitly identified as restrikes, were made between the years 1862 and 1880, and are described in the next section.

Pridmore 7 – Identified by Pridmore as the P.7 variety, these specimens were struck from a new reverse die. This die was made from the original reverse hub. This reverse die would more than earn its keep; the Taylor family used it for all subsequent fantasy strikes and mulings of the Ship's Penny. This reverse would be paired with a total of four obverse dies during its service life.

Examination of a specimen of this variety *vis-à-vis* an original specimen reveals how little detail was actually hubbed! The ship, waves, and denticles are identical, but the superficial rigging, date digits, and even the bowsprit are noticeably different. The differences are attributable to a manual die finishing process.

A new obverse die was also made from the original obverse hub. This new die is noteworthy as there is extensive denticle repunching, even in the absence of any indicators of die wear. Careful examination of this denticle repunch pattern relative to similar patterns on known original specimens reveals that the P.7 obverse denticle pattern forms the basis for all denticle patterns on all preceding dies. One must conclude that the obverse hub featured a basic pattern of reworked denticles in which the craftsman worked his way around the hub, trying to iterate toward perfection – or at least something more closely approximating symmetry! Mint workers added to this mess by repunching the denticles on the dies to maintain their appearance during the production run.

These specimens bear a strong resemblance to the original coins, and differ most obviously in the rope patterns as well as the style of digits used in the date. Additional, more subtle differences exist, including:

- the appendage of decorative balls atop the three large masts (foremast, mainmast, and mizzenmast),
- the use of a different style of lettering in “BERMUDA,”
- a longer and thinner bowsprit,
- and erosion of denticles on the reverse at 12 o'clock and again between 1 and 2 o'clock.

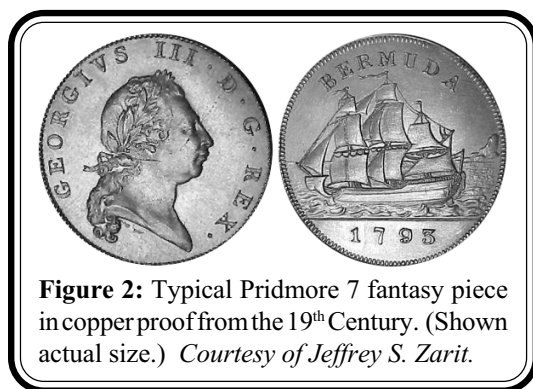


Figure 2: Typical Pridmore 7 fantasy piece in copper proof from the 19th Century. (Shown actual size.) *Courtesy of Jeffrey S. Zarit.*

These differences, however, require a bit more focused concentration to appreciate. Figure 2 contains photos of the obverse and reverse of a typical Pridmore 7 proof. This specimen was copper, although silver proofs have also been reported. Pridmore categorized the silver proofs as P.7A.

Pridmore 8 - 9 – Pridmore varieties, numbered 8 and 9, identify more fantasy varieties made with the same pair of dies as Pridmore 7. All three of these numbered varieties share a common reverse die, but differences can be seen on

their obverses. Their obverses are very closely related, and appear to be different die states of the same die pairing. They differ noticeably in two regards. First, both feature a different style of stops in the obverse legend. Rather than circular stops, as is seen on all of the original production strikes, these two feature diamond-shaped stops. The last stop in the legend (after REX) is the Greek character alpha, α .¹ Pridmore's varieties 8 and 9 share this modified legend, and differ in hair configuration only. The Pridmore 8 features a heavier mass of hair running under, and parallel to, the bust's truncation. This feature is completely absent on the Pridmore 9, but appears, in published photographs of this variety, to have been polished off the die. The Pridmore 9 also

¹ This character is oriented such that it appears to obliterate the protruding hub flaw found on all original strikes. Thus, its selection and location may have been a deliberate attempt to conceal a decades-old flaw in the original hub. Figure 6 in this article is a close-up of this diagnostic flaw.

features an extra curl on the extreme terminus of George's flowing tresses. Although neither variety could be personally examined for this article, both differences can be explained via modification of an existing die, as opposed to creation of a new die.

Another distinction between the P.8 and the P.9, is that the P.9 is only known to have been struck in silver. The P.8 was struck in a variety of metals including copper, silver, gold, aluminum, and pewter. Whether or not the copper issues of this variety were intended as deceptive substitutes for the originals cannot be known. One can only surmise that they were intended as such, because even today, experienced numismatists frequently mistake them for originals. If they were intended as deceptive facsimiles, then one has to accept that a collector's market for these pieces was beginning to emerge in the latter part of the 19th Century, when Taylor was minting these pieces.

Pridmore 10 - 12 – These pieces should be self-apparently distinct from original strikes as they were struck in different metals, and were paired with three different and illogical obverse dies. The first two feature the broad rim with incuse lettering seen on English halfpennies. They differ in that one features a draped bust of George (P.11) whereas the P.10 specimen more closely follows the bust featured on authentic specimens. A more obvious diagnostic found on the P.10 variety is the word "SOHO" at the six o'clock position of the broad rim. All three of these varieties share a common reverse: the same one first seen on the Pridmore 7 variety.

It may be possible to determine which of the two similar varieties was struck first by examining the common reverse for die wear characteristics. Such an examination, if extended to multiple specimens, may also prove that the two varieties were manufactured concurrently.

The Pridmore 12 variety, again, uses the Pridmore 7 reverse, but it is paired with a completely new obverse. This obverse features a draped and crowned bust of George III, as well as an unabbreviated legend. Taylor fabricated this die using a puncheon of the bust made by Conrad Heinrich Kuchler.

Debating the Originality of Pridmore 6

Pridmore hedged his bets with his P.6 variety; he never explicitly declared it to be either original or a restrike. Instead, he gave it a category apart from the original varieties. Subsequently, numismatists have accepted it as an important proof-only issue of this coinage. But, that acceptance sidestepped the issue of the coin's authenticity and purpose! The ship's details on the various later fabrications are simply too precisely matched to known original coins to have been struck from a completely new die. Yet, many other features were absent, most noticeably the ship's rigging! Pridmore glossed over such disparities, among his varieties numbered P.7-9, by stating:

The reverse die is that of No. 6, but considerable re-engraving has been carried out on the sail outlines; the sail cordage has been erased; pennants altered and different date numerals used.

This explanation leaves anyone with a basic knowledge of coin manufacturing technologies wondering how metal could be added to the negative image of a die to "erase" details! It would have been very obvious if those details were removed by lapping the die, because of the surrounding details that also would have been removed.

Upon scrutiny, one realizes that many of the missing details are very fine lines that are superficial to the sails. Consequently, they would have been virtually impossible to create as a positive image on a hub. However, such details would have been trivially easy to add as a negative image to a die via a simple punching or engraving process. Indeed, if one scrutinizes pristine original

specimens, it is quite common to find many of these same details re-engraved to restore detail to worn dies. It is highly likely that reverse dies were created from a hub, and then hand-finished to include the most superficial details. This manual finishing process creates the probability of inconsistency from die to die.

Thus, Pridmore was incorrect in his claim that the reverse of the various restrikes, designated by him as numbers 7-12, were struck from the same reverse die as his number 6 variety. The most likely explanation is that the dies were made from the same incomplete hub, and then hand-finished in varying degrees of completeness relative to the Pridmore 5x varieties. Thus, the Pridmore 7-12 varieties were struck from a new die that was created from the original reverse hub. This die fabrication occurred sometime in the second half of the 19th Century after William Taylor purchased many of the Soho Mint's dies and related miscellany.

To the untrained eye, a business strike Pridmore 7 might appear to be part of the original production run. In the past, this was particularly true as the scarcity of high-grade pieces meant that precious few people were privileged to conduct side-by-side comparisons of uncirculated or proof original specimens with the later fabrications. Even today, most world coin dealers are generalists and can't differentiate between an original coin and one of Taylor's copper fantasy pieces. Compare the obverse and reverse presented in Figure 2 with the original coin presented in Figure 1. Without a readily available point of reference, it would be easy to confuse one with the other. Further complexity is added by the fact that not all of Taylor's creations were proofs! Although Pridmore believed this to be the case, coins that fit the Pridmore 7 classification exist as business strikes, and at least one of those was struck through a light layer of grease! This grease obliterated enough fine details that the coin appeared to have been circulated. This specimen was recently put up for sale as an original business strike in extremely fine condition and is now a part of the author's collection.

There are several distinct diagnostics that, after one is familiar with them, make differentiating a copper 19th Century fantasy piece from an original strike quite straightforward. In addition to the lack of superficial ropes, the other diagnostics for this reverse die include:

- Denticles that were erased between 1 and 2 o'clock on the reverse. Ostensibly, this was due to overly enthusiastic lapping to remove rust from the original reverse hub.
- A different style of date digits. The 7 features a nearly vertical bar, and the 9 so curved as to be almost closed. The 9's tail terminates in a ball, as opposed to the straight tail featured on original coins. The 3 is also from a new style of punch and lacks the diagnostic raised lump of metal caused by a defective boss on the original 3 puncheon.



Figure 3: Original date digits.

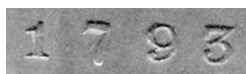
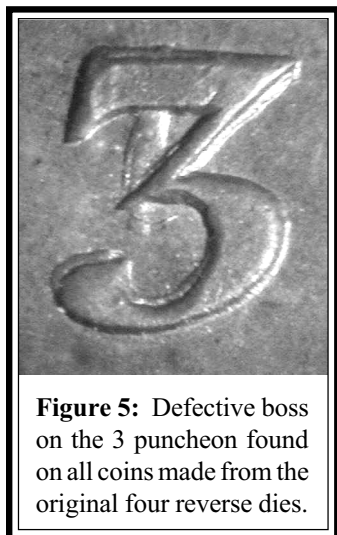


Figure 4: Pridmore 7 fantasy piece date digits.

To better appreciate the dramatic differences in the style of digits used on the Taylor's fabrications vs. original coins, compare the dates shown in Figures 3 and 4.

An additional diagnostic is found upon closer inspection of the number 3. This digit was punched using a puncheon that had a defect on its boss. Figure 5 contains an extreme close-up of this numeral, and its attendant boss defect. Please note, the numeral in this photograph was double-punched; both the digit and the raised lump caused by the defective boss are doubled.



The defective 3 boss is found on all original reverse dies, including the Pridmore 6. The reverse(s) cut from the hub in subsequent years features digits punched from a new set of puncheons. Given its highly protected location within the recesses of the 3, the boss defect remains in evidence even on very low-grade specimens, although high magnification may be required to actually see it. Thus, it is an important diagnostic that can help establish the authenticity of a specimen of this issue. Taylor's fantasy pieces and mules utilize a completely different style of date (as evident in Figure 4) which means that the original, but defective, 3 puncheon wasn't among the articles that Taylor purchased from the Soho Mint.

Given all these physical differences, one must conclude that Pridmore was wrong in his assertion that the reverse varieties he numbered 6 through 12 were created from the same die. There are simply too many differences for that to be possible. However, Pridmore's varieties numbered 5 through 12 represent images

from the same reverse hub! Numbers 7 through 12 share a common reverse die – sans many of the features that were manually added to dies in 1793. Pridmore's Number 6 was made from a different die than were these later restrikes. The logical implication is that the original obverse and reverse hubs both survived intact until the mid-19th Century when they were purchased by Taylor, and used to create new dies that were employed to strike fantasy and off-metal facsimiles as well as mulings of the 1793 Bermuda copper. The fact that most of those fabrications used completely different obverses seems to indicate that the original hub did not survive long after Taylor bought it. Thus, new and illogical obverses were pressed into service. The motive for such production remains a mystery. Clearly, these fantastic pieces weren't going to fool anyone into mistaking them for original specimens!

After carefully examining all the physical evidence, one must conclude that the Pridmore 6 variety is an original product that was struck from a die that had not been completely hand-finished. It is more closely related to the various Pridmore 5x varieties than it is to the restrike varieties 7 through 12. One of the other more compelling diagnostics is the rope that connects the port side of the spritsail (the square-shaped sail hanging under the bowsprit). The portside rope is lashed to the foremast on all original reverse varieties. However, on Pridmore's varieties 5b and 6, this rope runs straight and intersects the mast above the middle sail. On 5a, this line has a catenarial arc, starts at the left-most tip of the spar and intersects the foremast between the second and third loop on the top-most section of that sail. This rope is completely absent on the P.7 reverse. Thus, the #6 variety is more closely related to the #5b than it is to any of the fantasy pieces! This diagnostic is useful even on well-circulated specimens² as the ropes pass through recessed areas of the coin's design.

Furthermore, the Pridmore 6 variety features the original style of date digits – including the 3 puncheon with the defective boss. The only basis Pridmore could have had for classifying his variety Number 6 as a restrike is the incompleteness of the manual die-finishing process. Whereas 7 through 12 were not treated to many subtle details (most notably rigging across the face of the various sails), the Pridmore 6 lacked only a single rope across the face of the jib (the triangular

² Personal communication between Mark Sportack and Dr. Philip Mossman on 28 May 2001. More detailed spritsail rope diagnostics are presented in the Reverse Die Findings section of this document.

sail above the bowsprit, and connected at its top to the foremast). When one compares a Pridmore 6 reverse to a Pridmore 7 reverse, one is immediately struck by the dramatic differences between the two varieties. Conversely, comparing a Pridmore 6 with either a 5a or 5b requires careful scrutiny to identify the differences. Thus, the absence of this one rope on the Pridmore 6 is most credibly attributed to human error during the die-finishing process in 1793.

Pridmore misinterpreted this missing rope as symptomatic of the much later restrikes that emanated from the Soho Mint. He based his claim on the fact that this variety was known only in proof. As will be seen in the census table of surviving examples near the end of this article, there is a preponderance of Pridmore 6 proof specimens but a dearth of business strikes. A factor that may have contributed to the rarity of P.6 business strikes relative to proofs is that the reverse developed a cud between 4 and 5 o'clock. Early in the production run, such a flaw in the die would have been adequate cause for retiring the die. There is evidence to suggest that this reverse die was retired early, and that a second reverse die was mated to the same obverse die. One can easily forgive Major Pridmore for this oversight; his intent was to produce a comprehensive catalog of British Empire coins, and not an in-depth study of a single issue.

There are two known examples of uncirculated business strikes struck from the "Pridmore 6" die pairing. The author's specimen demonstrates all of the characteristics of an early strike from the original 1793 production run, including obverses that were struck from a die that is also paired with Pridmore's "single pennant" reverse variety. These specimens, when viewed in the context of the chain of known die pairings for this issue, provide irrefutable proof that the Pridmore 6 variety was struck from dies that didn't survive long enough to be used to make restrikes.

Of course, this exploration of the originality of the Pridmore 6 variety fails to explain the surfeit of proof specimens. However, it should amply demonstrate that there are some inexplicable anomalies that cannot be resolved within Pridmore's classification system. Reconciling those differences requires an appreciation of the events leading up to the coins' issuance.

History of the Coinage

Perhaps the most intriguing aspect of this issue is its singularity in Bermuda's numismatic history; it was Regal coinage that was authorized specifically for Bermuda but the issue consisted of just a single denomination. More perplexing, is that this single denomination – decreed to be a penny – was only minted in 1793! Thus, it hardly seems possible that King George III seriously intended this issue to satisfy the Bermudian economy's currency requirements.

Bermudians would have to wait until 1970 before they would again be honored with Regal coinage bearing the name of their nation. Historians and numismatists were left to ponder why a colony that was chronically in desperate need of a hard medium of exchange would be treated to a one-time delivery of pennies. As one may well expect, there is no single answer to this mystery. Rather, there is an entire web of interwoven answers. One must peruse the collection of Matthew Boulton's Papers to best understand the issuance of these coins, the timing of events leading up to their manufacture, and the nuance of interaction between the King, Bermuda's Governour Henry Hamilton (via London-based agent Brickwood, Pattel and Company), and the Soho Mint.

One easy answer to the mystery of the one-year, one-denomination issue is that it was intended as a circulating commemorative. The year 1793 bore witness to a most auspicious event in Bermuda's history; Bermudians had finally succeeded in chartering a new capital city, Hamilton, for their colony. Earlier attempts had bogged down and failed for a variety of reasons, despite their having so obviously outgrown St. George's Town.

Ostensibly, King George III saw fit to honor this milestone in Bermuda's development. The manner he chose, although largely symbolic, was to issue a circulating commemorative coin for use within the islands of Bermuda. Thus, he authorized (at Bermuda's prodding!) the use of his effigy on a copper coin to be manufactured for use in Bermuda. Unfortunately for Bermuda, the King's assent did not translate into financial subsidy! Bermuda had to purchase the copper, and negotiate its own deal with a private mint. This meant that the deal had to be self-profitable for Bermuda. In other words, the "face" value of the coins produced had to equal or exceed the total cost of metal, manufacture, and transportation. In retrospect, it is clear that approaching the King with the idea of honoring a specific event with a circulating commemorative coinage would have had a much greater chance of success than simply approaching the King to ask for a circulating coinage. If nothing else, the commemorative aspect of the request would have, *de facto*, made the request a one-time event and taken the King off the hook for future commitment. Of course, rising copper prices likely obviated any chance for reprising the coinage regardless of the motive behind Regal approval.

Bermuda engaged the services of John Brickwood,³ of London-based Brickwood, Pattel and Company to act as their agent. Brickwood, in his initial correspondence to Boulton dated 8 November 1792, relayed news of the King's consent to the coinage, and stipulated the design elements of King George III's effigy and date on the obverse and a sailing ship with the word "BERMUDA" on the reverse. Brickwood also specified the date as an obverse device. The most important stipulation of all was that there should be twelve of these coins to the 7-pence worth of copper.⁴

Boulton, painfully aware of his potential customer's need for quick turnaround (and probably eager to keep his own production facility busy), replied the very next day: 9 November 1792.⁵ His response, although somewhat long-winded, concluded with:

If these terms are agreeable to you, I should be glad to receive your orders in a few days, that I may put the dies in hand before I set out to London, where I propose to be on the 17th ...

He teased Brickwood by claiming he could begin production very quickly and led Brickwood to believe that useable dies were already sitting on his shelf. Jean Pierre Droz had been an engraver employed by the Soho Mint. During his employ there, he created an obverse design bearing the effigy of King George III. The design was generic in that it omitted date and country of origin. As such, it wouldn't quite meet Brickwood's design stipulations (the date would have to be moved to an exergue on the reverse), but it would greatly reduce the lead-time to manufacturing and also keep Boulton's costs down. Similarly, Boulton also had a pre-available reverse design that is attributed to Noël-Alexandre Ponthon, a French engraver. In retrospect, it seems much more likely that Boulton had generic hubs and only sunk dies when a prospective customer appeared. Boulton offered to hand-deliver sample dies for Brickwood to inspect to ensure that the designs were acceptable despite not quite meeting the specifications. While ever the professional in his dealings with customers, Boulton was not above applying sales pressure. Copper prices had been on the rise and had experienced a 25% increase in just the last year, Boulton cautioned. He then offered some "back of the envelope" costs for Brickwood: 28 coins will weigh one pound and cost

³ The Matthew Boulton Papers contain a series of correspondences between Boulton and Brickwood that detail the subtlety of negotiation and Boulton's creative attempts to get the contract signed.

⁴ This stipulation had the unanticipated effect of confusing numismatists for centuries to come as to whether the 1793 Bermuda copper was a penny or a half-penny.

⁵ It is impressive that overnight delivery between London and Birmingham was possible in 1792.

16 ½ pence. Of that cost, 11 ¾ pence will be for the copper alone and there were still post-production costs to absorb including the transport of the coins to Bermuda. The implication was clear. If Brickwood didn't act soon, and copper prices continued their upward trend, these coins wouldn't be worth making!⁶

Time inexorably marched on and yet Boulton still, for all his efforts, lacked the authorization needed to begin production. Brickwood apparently asked for a detailed cost estimate for coining a ton of copper for Bermuda. Boulton complied, with an estimate of £184.19.6 total cost of raw materials, manufacturing, and shipment of the finished goods to Brickwood in London. This estimate was dated 7 May 1793, and reads like a bill of lading! Reading the document, one is left with the impression that the coins were actually shipped, and their total costs being tallied up for the customer. The records state that at £112 per ton for the copper, the metal for the coins cost £122.18.6. This equates to 122.93 pounds sterling (converted from £ to decimal numbers for ease of calculation) which divided by the stated cost per ton of copper yields 1.097582 tons of copper. That tonnage value, when multiplied by 2240 to convert that era's long tons back to pounds, yields 2458.58368 pounds of copper.

Although Boulton specified 28 coins to the pound which translates into 250 grains per coin, proof and uncirculated coins average only 210 grains per coin. Thus, some unrecorded agreement must have been reached to reduce the coin's weight from 250 grains to 210. The result is an increase in the quantity of coins yielded per pound of copper from 28 to 33.33. The total yield would have been an estimated 81,952 coins minted. Applying Boulton's stated manufacturing variance of one-half of one percent⁷ yields a plus-or-minus range of 409 coins for an estimated mintage that ranges from 81,543 to 82,361. Given the decreed value of twelve of these coins to a shilling, there would have been 240 to a pound sterling. This yields an approximate face value of somewhere between £339 and £343 of coins delivered to Brickwood in London. The total estimated minting tab came to £184.19.6. All this, of course, assumes that Boulton got a contract to coin one long ton of copper into Bermuda's pennies. One must accept this as a mathematically derived estimate of mintage quantities, rather than an historical fact.

Sensing that a deal was imminent, and in an attempt to seal the deal by demonstrating the quality of his mint, Boulton made 100 specimens – 50 copper and 50 bronzed.⁸ It is important to note that no documentation exists to suggest that these specimens were struck as proofs; Boulton refers to them only as "specimens." All that is known for certain is that 50 copper and 50 bronzed pieces were struck and billed to Bermuda via Brickwood, Pattel and Company. Previously, numismatists have simply assumed that all were proofs without really understanding why they were made! Unfortunately, no additional historical data are available that would support that assumption, yet this historic datum provides a rational explanation for why proofs exist in this coinage.

⁶ Boulton was not exaggerating. By 1795, the price of copper in New York City was 25.2 pence per pound. See P. L. Mossman, *Money of the American Colonies and Confederation*, (New York, 1993), page 249.

⁷ Boulton was proud of his manufacturing tolerances. The Tower Mint variance was 1 in 40 parts of the metal's weight, or 2.5%. However, a sample of uncirculated and proof coins reveals that his manufacturing tolerances were quite a bit more generous than he liked to boast. Assuming a target of 210 grains per coin, a sample from the author's collection ranged from 199.9 grains up to 221.8 grains. The actual variance in this small sample more closely approximates 5% plus or minus! Not bad for 1793, but a full order of magnitude off Boulton's boasts of 0.5%, and twice as bad as the Tower Mint! If the variance of this sample truly indicates the Soho Mint's manufacturing tolerances, then the potential mintage would vary plus-or-minus by 4,097 coins from the 81,952 statistical midpoint, rather than just 409 coins. This yields an estimated mintage range from 77,855 to 86,049.

⁸ In personal communication with the author, Dr. Doty explained that bronzing was a process perfected at the Soho Mint around 1790. It involved dusting flans with powdered bronze prior to striking. The heat generated by the strike bonded the bronze to the surface of the struck coin, thereby imparting a bronzed patina to a copper coin.

These specimens were shipped from the Soho Mint to Brickwood on 9 May 1793. Boulton accounted for these prototypes, and charged them back to Brickwood, separate from the main production run. The charges included £0.3.0 for the 3 lbs. of copper,⁹ and £0.1.6 for manufacturing expenses for a total of £0.4.6. Implicit in this cost summary is the fact that the price of copper had, as Boulton predicted, risen dramatically since their first correspondence. The November 1792 price of 11 $\frac{3}{4}$ pence per pound of copper quoted by Boulton had apparently spiked up to a full shilling per pound in just 7 months! Of course, this price could have simply reflected the higher unit costs of producing so small a batch, or even Boulton's frustrations with the delays in getting the deal signed. One must accept the 7 May 1793 estimate as more accurate for coining a ton of copper. A more subtle numismatic implication of this correspondence was that one pair of dies could easily have produced this batch of pre-production, prototype proofs. The nagging question remains; which pair of dies was used?

As of 3 June 1793, Boulton was still waiting for Brickwood's approval to start production. In fairness, one must remember that although communications between Birmingham and London could occur overnight, communications between London and Bermuda could take up to 3 months round-trip. Brickwood was merely Bermuda's agent: Governour Henry Hamilton (who was surprised and honored by having the new capital city named after him) was the man actually making the decisions. The delay was noted in a very tactfully worded letter to Brickwood bearing that date that was in reply to Brickwood's correspondence dated 29 May 1793. In that letter, Brickwood sent Boulton a draft of the Governour's Proclamation that would declare the coins legal tender in Bermuda, and asked him to fill-in the amount of coins that would be delivered. Boulton took the easy way out in his reply of 3 June 1793 by saying "not less than £200" because he hadn't yet started production and didn't want to commit to a more precise answer – especially in the face of sharply increasing copper prices.

Regardless of the price of copper, Boulton knew the face value of the finished goods must be appreciably greater than the £184.19.6 total cost he quoted to Brickwood the month before. He was, after all, a businessman in search of profit! And, he knew Brickwood would still have to incur the cost of shipping the coins to Bermuda. In this letter, Boulton took the opportunity to remind Brickwood that he remained optimistic that the sample proof coins he delivered would yet, in his words, "bear fruit...". He further assured Brickwood of complete satisfaction in any business transaction with the Soho Mint. Boulton then offered 60 days credit after delivery, and every other professional courtesy one could want. Reading between the lines, one can infer that he was still waiting for the contract to mint the much-discussed ton of coin and was aggressively trying to remove any excuses Brickwood may have had for stalling!

It might have been the hints, sale pressure, superb prototypes, or some combination of all three that finally did the trick. The Soho Mint was awarded the contract and the coins were released into circulation at the end of April in 1794. The result was a handsome copper coin that weighed approximately 210 grains, and was 31 mm in diameter. However, the scarcity of this issue today relative to how many were originally minted is not easily reconciled. It is generally accepted that 48,000 coins were released into circulation. This compares with mintage estimates that have been variously recorded as 72,000, 81,942, and even 83,589.¹⁰

⁹ It is noteworthy that Boulton did not identify costs of other metals that may have been used to make the "bronzed" specimens. Additional metal would have been necessary if he had struck them at 250 grains per coin, as 3 lbs. of copper would have only yielded 84 coins. However, the reduction in weight to 210 grains each, means that 3 lbs. of copper would have been exactly enough to make 100 coins.

¹⁰ The sources are: Pridmore's estimated 72,000 in *The Coins of The British Commonwealth of Nations – Part 3 West Indies*; 81,942 are quoted in Dr. Doty's book, *The Soho Mint and the Industrialization of Money*, (London, 1998), and finally 83,589 in *Coins of Bermuda* by Williams, et al in 1997.

Although it is difficult to state with any degree of certainty where any given number originated, the persistent value of 48,000 has some basis in historical records. Bermuda's Governour Henry Hamilton, in the public Act of 26 April 1794 declared the new coins legal tender at the rate of twelve per shilling, with the proviso that no more than eleven could be used in any single transaction. In the same text, it was acknowledged that King George III had authorized the mintage of "not less than £200" worth of the new pennies. Given twelve pence to a shilling, and 20 shillings to a pound, it seemed a safe bet that 48,000 coppers reached Bermuda's shores.¹¹ A lot more were probably minted, as evidenced by Boulton's records and the interactions between Brickwood, Boulton, and the Governour, but apparently never reached Bermuda—assuming, of course, that the Governour's count was derived via an inventory of delivered coins. Many researchers have seized upon the unstable geopolitical climate as the source of this numerical disparity: England and Holland were at war with France and Spain. Privateers ruled the seas! One could easily conclude that the disparity between the quantity minted and the quantity released by Bermuda's Governour into circulation represented the ill-gotten gains of privateers.

Such speculation, however sound the reasoning behind it may be, ignores the basic fact that the figure quoted by the Governour wasn't obtained by counting up the delivered coins. Matthew Boulton supplied the actual figure eight months prior – which was at least one month prior to the actual start of production! The Governour simply followed the script prepared for him. When one considers that the entire production run would have fit inside just seven casks¹² – each containing only about 320 lbs. of coins – and that those casks would have easily fit inside a single ship's cargo hold, it seems odd that the shipment would have been dispersed across multiple ships. However, it is possible that such dispersal occurred due to episodic manufacturing caused by copper shortages or mechanical failure. Alternately, Brickwood may simply have been trying to hedge against the threat of foreign interdiction.

Regardless of how many coins were actually minted and/or released into circulation, by 1823, the pennies had completely disappeared from circulation. Yet, there was no effort to reprise the mintage of 1793. Unlike the Bahamas and other colonies, where tokenized coinage failed, the Ship's Pennies were a splendid success story. Today, the vast majority of the specimens that are available bear silent testimony to their commercial success: they are worn nearly smooth! So, the two vexing mysteries are:

1. Why did so successful a coinage abruptly cease circulating?
2. Why are specimens so scarce today, when approximately 80,000 were made?

There were several contributory factors that precipitated the demise of the Ship's Penny as a circulating medium of exchange. These factors include:

- Foreign exchange rates with Spain shifted, resulting in the Ship's Pennies leaking out of Bermuda at face value and trading at higher values in Spain based on their metal content, or being melted for their copper.

¹¹ Robert Chalmers, *History of Currency in the British Colonies*, (London, 1893, reprint 1972). Chalmers claims that part of the mintage was captured at sea by pirates, and that only \$600 reached Bermuda's shores. No support is given for this statement, nor is the dollar value explained relative to the pound-sterling system used within the British Empire. The notion of piracy at sea, and the successful delivery of only 48,000 coins appears to have gained favor only recently, and has been cited in numerous numismatic references including *Coins of Bermuda* by Williams (page 68), and other minor, contemporary works including various web sites.

¹² Matthew Boulton's itemized estimate of production costs dated 7 May 1793 included the manufacture of seven wooden casks for transporting the coins made from a long ton of copper.

- The increasing cost of shipping from England to Bermuda as a result of war with France and Spain. A state of war meant active privateering on the high seas. This, in turn, translated into shipping losses, which had to be covered through price increases.
- The decreased availability, and increased cost, of copper due to the war. Copper was a strategic metal; it was indispensable in time of war. One could expect, under such circumstances, that the supply of metal was sporadic at best, especially in Bermuda and other remote colonies. Extant specimens of the 1793 Bermuda copper, including a proof and a well-worn business strike from the same die pairing; both exhibit grease-filled die errors. Such errors are indicative of an episodic manufacturing process, possibly caused by a sporadic metal supply in Birmingham.
- The deterioration of the purchasing power of Bermuda's exports in London.¹³

It becomes clear that, despite Hamilton, Brickwood and Boulton's best efforts to the contrary, the copper contained in the Ship's Pennies eventually became far more valuable than their decreed circulating value. Governor Hamilton, it seemed, could mandate the circulating value of these coins, but was powerless to control the world copper market, not to mention local prices and availability of that strategic metal. Thus, as romantic and appealing and even logical the story about French privateers and the loss of a large portion of the pennies en route to Bermuda may be, it doesn't appear to be true. No historical basis or source documents can be found to substantiate the suppositions of previous researchers. Sadly, the truth appears to be quite a bit more pedestrian: all the pennies were delivered safely, were enthusiastically received, and circulated heavily. But, the copper that the pennies were made from became much more valuable to Bermudians than the coins themselves. Consequently, they disappeared from circulation, and found their way into the melting pot.¹⁴

Encore! Encore!

Were the history of these coins to end here, it would be a very compelling story, especially considering how rare these coins are today. However, the intrigue continued! As Pridmore had noted, there appeared to be a steady stream of increasingly fantastic restrikes – all based on the 1793 Bermuda copper – emanating from the Taylor family in the second half of the 19th Century. The term, restrike, is used liberally in this context. A restrike implies the minting of a coin using original dies at a later point in time. Specimens resembling authentic coins made using non-authentic dies are nothing more than fantasy pieces. Given that semantic point, Taylor and his sons made fantasy pieces, not restrikes.

Pridmore's classification scheme for Ship's Pennies remains more useful for its breadth, as opposed to its depth in any particular category. Quite simply, it was superficial and inaccurate in many ways. Based on the simplicity of its classification, one can only assume that Pridmore either didn't have the luxury of good optical tools to facilitate his study, or that he was only able to examine well-worn specimens for his study, or both. Despite the attention that the 1793 Bermuda copper has received, Pridmore's work has been accepted without challenge or correction...until now!

¹³ These data must be pieced together from a variety of sources including P. L. Mossman, *Money*.

¹⁴ Lefroy, *Memorials of the Bermudas*, Volume I, page 131, 1877. Bermuda had a history of melting coins to obtain the metal to satisfy other domestic requirements. Bermuda had enacted a law against the defacing and/or melting of coinage in 1618. Apparently, the Colony's remoteness made the shipment of low-value metal household items such as bodkins unprofitable for the mercantilists. Thomas Fosbrooke, an enterprising metalsmith on the island, figured out that melting coins would provide the metal needed to manufacture such household items, which could then be sold at great profit!

A New Classification System

A survey of many uncirculated, almost uncirculated, and proof coins has enabled a more complete classification of die varieties and marriages within this issue. One must recognize that the available pool of such specimens is exceedingly small. Original proofs (if you accept the prototypes as “original proofs”) were reportedly limited to just 100 coins. However, proof specimens are known to exist in almost all of the major die varieties, demonstrating that they were produced during the production run on an as-needed basis using equipment and dies set up for commercial production. These mid-production proofs were likely intended to facilitate commerce with new business prospects as Boulton encountered them. It is highly unlikely, based on today’s population of known proofs that he was as generous with these samples as he was with Brickwood. Rather, it seems much more likely that he bestowed as few as a single proof coin on potential customers and/or visiting dignitaries.

Further limitation was imposed on the potential quantity of mid-production proofs by the relatively short manufacturing interval. Remember: Boulton still hadn’t received the order in June of 1793, and the coins were released into circulation on Bermuda in April of 1794. That interval included crating up the coins, shipment by hull from Birmingham to London, and then the approximately 6-week journey from London to Bermuda. This short manufacturing interval was probably punctuated by periods of downtime caused by mechanical failures and/or copper shortages. Thus, it’s difficult to believe that Boulton enjoyed many opportunities to give out samples to other potential customers. The result is an extreme rarity of proofs made mid-production!

The majority of all high-grade specimens that come on the market today are proofs, rather than BU pieces, and most of those proofs were struck with the same die pair (usually identified as the Pridmore 6 variety).¹⁵ Examination of these specimens under magnification has enabled the identification of many new, die-specific attributes. These attributes include double-punched letters and digits, unique hand-engraved rope patterns, die cracks, die chips, cuds and cud progressions, pennant shapes, rotated dies, grease-fill errors, and even double and triple-hubbed dies. Cross-referencing these attributes found on high-grade specimens, with well-circulated specimens enables one to state with certainty that those high-grade specimens were part of the original production run, as opposed to later restrikes. Such correlation is challenging as many of the diagnostics completely abrade away in circulation. Key evidence in this correlation of high and low-grade specimens are durable diagnostics such as rope patterns in protected recesses, cud patterns and their progressions, as well as die marriages. The mainmast pennant, Pridmore’s primary diagnostic device, is particularly vulnerable to circulation wear, and is useless in diagnosing coins worn below EF.

Careful scrutiny of many high-grade specimens has proved quite revealing. In short, Pridmore’s 5a variety – identified primarily via its double pennant – proved to consist of two distinct reverse dies with similarly shaped pennants. Pridmore’s 5b, with its single pennant, also proved to consist of two reverse dies with similarly shaped pennants. All four of these reverse dies were used to strike both circulation coins, while at least three of them were also used to strike proof coins. These four reverse dies were paired with four distinct obverse dies. To more accurately describe each of these newly discovered die varieties requires a new classification system – one that is capable of uniquely describing individual dies and die marriages.

¹⁵ Many of the extant AU or BU specimens are from the last die pairing, raising the possibility that they are, in fact, restrikes made shortly after the original production run using original dies.

This new system embraces the convention of numbering individual dies in the sequence in which they were used, for both the obverse and the reverse. For example, the earliest strikes would have been made from the first obverse and first reverse dies. Such specimens would be identified as *Sportack 1/1* or *S.1/1*. This appellation identifies the classification system, the sequence-numbered obverse die, and the sequence-numbered reverse die, as is evident in the following table.

Classification Name	Obverse Die #	Reverse Die #
Sportack	1	1

A complicating factor in the identification of die varieties is the apparent penchant of the Soho Mint's craftsmen to touch up the details of working dies. The net effect is very different appearances for coins made from the same dies at different stages of those dies' service lives. Identification of specific varieties is also problematic in that many of the subtle diagnostics that could be used to identify the original die are destroyed in circulation. Consequently, it may not be possible to properly attribute well-worn specimens or specimens struck from fresh dies that had not yet acquired their most distinctive features.

Obverse Die Findings

It is apparent that the Soho Mint was very concerned about the appearance of their finished products. This is most evident in the early stage production of the 1793 Bermuda Coppers. Dies were created from a master hub that included the bust of George III and a base set of denticles. Legends were added by manually punching them into the dies.

A flaw was also present on the obverse hub that resulted in a small, irregularly shaped blob of metal. This blob protrudes from the surface of the obverse fields just to the left of the last stop (●) in the legend. It would be easy to dismiss this errant metal as a die chip, except that all obverse dies created from the original hub bear this tiny surface flaw. It is important to note that this misshapen blob of protruding metal can vary in size and shape. Factors such as strike pressure, malleability of the planchet metal, amount of die wear, and even cleanliness of the die can all impact the size and shape of this diagnostic. However, the location of this raised but errant device never varies. The following figure indicates what one can expect to find.

The flawed hub notwithstanding, much care was taken to touch up working dies to maintain the sharpness of struck details on the Regal side of the coin. The letters in the legend received particular attention and some of them were carefully repunched as many as five times! Each subsequent repunch was carefully placed, and made slightly deeper in the die, resulting in slightly greater relief of the character on the struck coin.

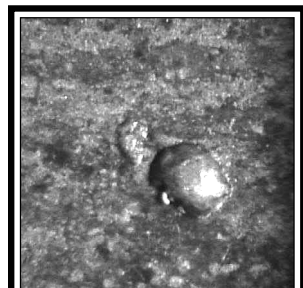


Figure 6: Raised metal caused by hub defect on all original obverse dies.

The assiduous maintenance of obverse dies by Soho Mint workers makes it almost impossible to identify coins struck from specific dies, particularly on well-worn specimens, as many coins struck from the same die pair can appear remarkably different. However, a careful survey of obverse diagnostics on both pristine proofs and uncirculated business strikes under 45X magnification has revealed the presence of four distinct obverse dies. These varieties are, in the order of their deployment:

1. S over Wide S
2. Rotated Die
3. Triple-hubbed
4. S over S

Additionally, the #2 obverse die was redeployed at the very end of production in a heavily modified form that is readily distinguished in all grades, thanks to repunched obverse letters that were of a noticeably different and fancier style. Each of these is described further and illustrated in the following section.

S over Wide S

Two of the obverse dies can only be distinguished via careful comparison to each other as their obverses share a similar, but different, attribute: a double-punched S in GEORGIVS. The shape of this double-punch differs, but requires familiarity with both varieties to properly identify either one. Unfortunately, that implies that one has access to enough pristine specimens of both varieties so as to be able to identify their subtle distinctions.

The first of these two varieties features the “S” punched on top of a much wider “S.” Consequently, the doubling is very apparent to the naked eye, even on circulated specimens. This type was used to strike the original batch of proofs and the die is recognized as the first in the production sequence. As such, it is attributed as *Sportack Obverse Die #1* or *S.1 obverse*. A close-up of the overpunched S is depicted in the following figure.

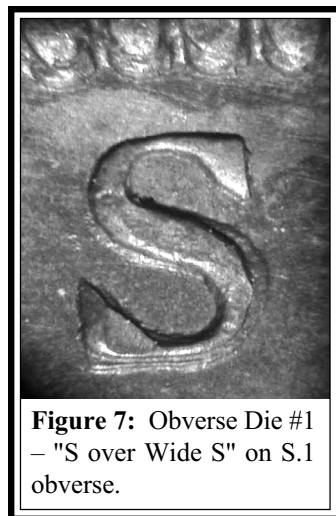


Figure 7 actually demonstrates a repeated overpunch of the letter S, the bottom-most of which is a very wide S. On this particular specimen, the letter S was treated to four separate punchings! This is common on the obverse legends of the 1793 Bermuda copper, and indicates attempts to maintain a sharp strike as a die wore down. Thus, it would appear that the “S over Wide S” repunch was performed during the obverse die’s service life rather than when the die was manufactured. However, a contravening point is that this obverse die was probably the one used to manufacture the original 100 specimens that were presented to Brickwood in 1793. Fifteen of those have been tracked down and personally inspected, and all bear the same overpunched letter. It seems unlikely that such repunching would have been necessary to restore any crispness of detail after less than 100 strikings. Thus, it seems more likely that the Wide S was a pilot punch – lightly tapped in for visual inspection of alignment on the die during its manual finishing process. The finishing punch, for reasons

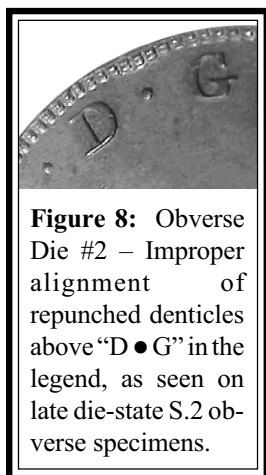
unknown, was performed with a different S-puncher thereby resulting in the “S over Wide S” obverse variety.

Rotated Die

The second obverse die used to strike 1793 Bermuda Coppers bears an intriguing diagnostic that remains useful even on About Good and Poor specimens. This variety and its only known reverse die (the “single pennant” reverse) are most frequently seen rotated off-center. This issue normally features a “coin turn” orientation. That is, the obverse and reverse are rotated 180 degrees from each other. Specimens struck from this particular die pairing are almost always rotated off-center. However, the degree and direction of that rotation varies! Generally speaking, the coins range

from 15 degrees under-rotated, to 15 degrees over-rotation. No other die marriage identified to date features such rotation.

This obverse die appears to have been a victim of the Soho Mint workers' zealously to refresh obverse die details. Virtually all specimens struck from this obverse die that have been examined bear evidence of both repunched letters in GEORGIVS, and a series of die cracks through those letters. Thus, it appears that the early attempts to maintain the crispness of obverse details backfired, and actually caused the premature destruction of the die. This die, by virtue of being the second obverse die used, is identified as the *Sportack Obverse Die #2* or *S.2 obverse*.

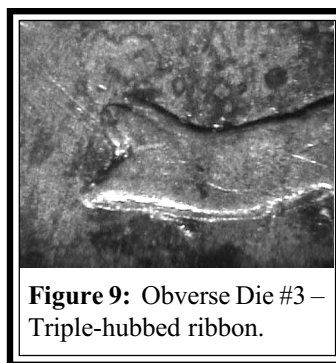


This die, at least in the die-state shown in Figure 8, demonstrates a unique pattern of denticle doubling between 1 o'clock and 2 o'clock. The denticle punch wasn't carefully aligned with the denticles on the die prior to repunching. Consequently, the repunched pattern actually protrudes into the field above "D • G." This protrusion is readily apparent without magnification, but was done well after it entered production. Curiously, one well-worn specimen has been located that bears the die rotation, but not this protruding denticle pattern. Thus, the obverse die was removed from the press, details refreshed, and then re-installed so as to preserve the rotation by exactly the same amount! This leads one to conclude that it was the reverse die that was improperly installed, rather than the obverse die. A more subtle point is that the reverse die was probably the hammer die; if the anvil die was rotated, the misalignment would have been obvious to anyone paying attention!¹⁶

Other late die-state diagnostics include an obverse cud at 10 o'clock, and several distinctive die cracks (the author's uncirculated specimen has four) running through "RGIV" of GEORGIVS.¹⁷

Triple-hubbed

The next of the known obverse dies is the most individually distinct, and is easily identified on higher-grade specimens, as it was triple-hubbed. Coins struck from this die demonstrate a nice separation of doubled features, most noticeably the leaf tips in George's crown and the split-ends in the ribbon that holds back his flowing tresses. Under 10X magnification, the doubling of the ribbon's upper split-end is readily apparent on high-grade specimens, and actually appears to be tripled under higher magnification. Figure 9 demonstrates the multiple, separated ends of George's hair ribbon.¹⁸



¹⁶ Additional evidence supporting the use of the reverse as the hammer die is a pair of unusual struck-through error coins in the author's collection. One of these pieces, certified by NGC in slab #1290899-001 as MS61 BN, features six small blobs of copper adhered to the surface of the obverse. All are concentrated in what would have been the lowest recesses of the die: the middle letter "I" in "III," and George's cheek. The other is a proof and features another extraneous bit of copper adhering to George's neck — another deep recess in the die. These extraneous adhesions, and their locations make sense only if the obverse was the anvil die.

¹⁷ These cracks precisely match those seen on the "fancy letters" variety.

¹⁸ Obverse Die #1 was double-hubbed, but that doubling was extremely subtle, and did not result in any large degree of separation on struck coins.

The triple-hubbed obverse variety is seen on specimens that demonstrate great disparity in the quality of the strike. The author owns four of these specimens: two proofs and two business strikes. One of the proofs is lightly circulated but otherwise a fully struck coin with no impediments to the obverse devices. The other proof was struck from the same die pair, but exhibits a greater amount of die wear, as evident in the erosion of fine detail, and the progressions of rim cud and a die crack. More importantly, this specimen has grease-filled letters in the obverse legend, and a generally lower quality of strike when compared to the S.1/1 prestrike specimens. The two known business strikes demonstrate a very similar pattern: the early die-state coin is stereotypical of Soho Mint products while the latter die state coin bears the exact same grease-filled die error on the obverse legend. The interesting aspect of this impaired coin is that it is in Good condition, having circulated extensively!

While such disparity in quality is unusual for products from the Soho Mint, it is not necessarily evidence that the coin is a restrike. In fact, neither this triple-hubbed obverse, nor the only reverse seen paired with it to date, bear design features that are consistent with the 19th Century restrikes. Instead, it seems more likely that they were used late in the original production, when cost-containment became a higher priority at the Soho Mint than quality control. Grease-filled letters, in this particular case, are likely indicative of an episodic manufacturing process rather than long-term storage. Such discontinuity of manufacturing activity, given a single contract for the entire production run, likely indicates a sporadic supply of refined copper or die storage due to mechanical failure.

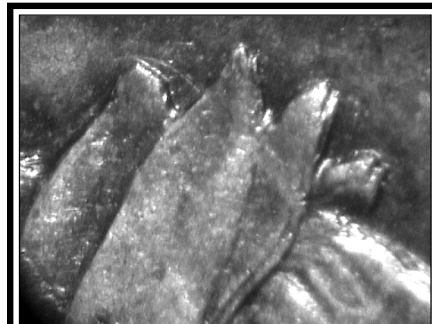


Figure 10: Obverse Die #3 – Triple-hubbed leaf tips.

The triple-hubbed obverse is identified as *Sportack Obverse Die #3* or *S.3 obverse* in deference to the probable chronological sequence of die usage. A close-up of the S.3 triple-hubbed leaf tips is presented in Figure 10. A note of caution: the separation of leaf tips is not very wide. It can be seen with the naked eye – even on well-worn specimens – if and only if that eye knows what to look for! Otherwise, the tripling can be appreciated with the assistance of optical magnification.

S over S

The fourth obverse die variety also features an “S over S” overpunch. Unlike the “S over Wide S” variety, this overpunch is not as obvious. Both letters are extremely similar in size and shape; neither is the “wide S” featured as the first punch on the S.1 obverse. Instead, they are of the narrower “S” that was punched on top of the “wide S” in the S.1 obverse. On this particular variety, the top-most character just wasn’t perfectly aligned over the character it was punched over. Consequently, a minimum of 10X magnification may be needed to see the overpunched character. A specimen may be found that does not demonstrate the double-punched letter. In such cases, the shape of the “S” (wide or narrow) must be used as the determinant.

This type is believed to have been the last one used in the original production during 1793. Such a determination was founded on the basis of die marriages *vis-à-vis* die wear. This die is attributed as *Sportack Obverse Die #4* or *S.4 obverse*. A close-up of the overpunched S is depicted in Figure 11.



Figure 11: Obverse Die #4 – “S over S” on S.4 obverse.

Fancy Letters

The last obverse die variety is really a different stage of the S.2 obverse die. That die was retired from active duty when it suffered a series of die cracks through RGIV of GEORGIVS. It was put into storage rather than simply discarded. Given that it was already damaged, mint workers may not have bothered to pack it in grease prior to storage. At the very end of production, the #4 obverse die apparently suffered a catastrophic failure, possibly as a result of a clash with the reverse die. To enable production to continue without incurring the cost of sinking another die, mint workers dug up the remains of the retired S.2 obverse die.

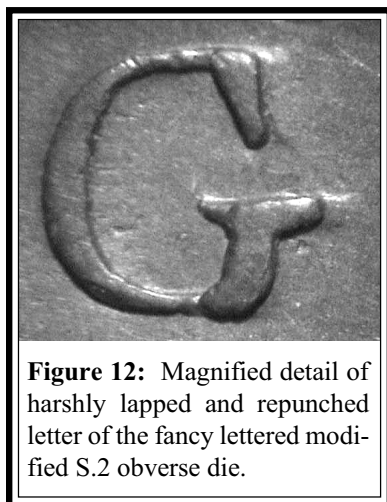


Figure 12: Magnified detail of harshly lapped and repunched letter of the fancy lettered modified S.2 obverse die.

The S.2 obverse die suffered greatly in storage, and the few extant coins struck from this die during its second tour of duty bear the scars of "heroic" efforts to restore it to a serviceable condition. The fine details have been lapped into oblivion! Important details were re-punched, including legend characters and denticles, but traces of the old features remain in evidence. The net effect of these restorative efforts is that the obverse of the only known uncirculated specimen lacks any fine detail despite being so well preserved that it bears strong luster and a light, undisturbed patina with much of the original redness still evident. Figure 12 demonstrates the crudeness of the effort to lap and restore obverse detail on the second generation of restrike. The ghost of the previous character remains visible, as do the lapping scars. Curiously, the letter G appears to have been pieced together via three separate punches of partial letters.

The typeface used to repunch the obverse legends differed greatly from the original puncheons. The letters are much fancier than the original letters, and are depicted in Figure 13. The extensive amount of rework, under ordinary circumstances, would preclude the positive identification of the obverse die. Serendipitously, a series of die cracks are evident that run through "RGIV" in GEORGIVS. These cracks enable a positive identification of the production die that was salvaged.

Obverse Die Summary

With the exceptions of the S.3 triple-hubbed obverse and the modified fancy letters S.2 obverse, differentiating between the obverse dies is an exercise in subtlety. Positive identification may not be possible on very low-grade specimens. Similarly, specimens struck from fresh dies may lack many of the unique diagnostics that were created by Mint workers in their effort to maintain the crispness of detail on their products. Consequently, one must remember that denticles and letters were almost continuously repunched to maintain sharp detail on struck coins, thereby substantially changing a coin's appearance over the life of the die. Add to this the fact that many of the diagnostics abraded away quickly in circulation, and you have a real conundrum! Perhaps the best approach to identifying the obverse of a 1793 Bermuda Copper is to start with the identification of the reverse die. This, at a minimum, narrows down the field of possibilities based on known die marriages.



Figure 13: Fancy letters on the obverse of the modified obverse die S.2.¹⁹

¹⁹ Figure 21 depicts the reverse of this coin.

Reverse Die Findings

As Pridmore realized, the reverse or “ship side” of the 1793 Bermuda Copper is the more interesting. Curiously, the reverse dies do not seem to have enjoyed the same attention to detail that mint workers paid to the obverse. Like the obverse dies, the reverse dies were created from a master hub and then hand-finished. Details that were manually added to dies include the date, the word BERMUDA, and much of the rigging, particularly those ropes that were superficial to sails. On all but the second reverse die²⁰ used, the only details touched up on the reverse (ship) dies *during production* were the rigging and sails.

A careful analysis of reverse dies has enabled the identification of four distinct die varieties. It is important to note that, although the mainmast pennant is used as the primary diagnostic, many other more subtle diagnostics were used in the survey to validate die identification. The reverse dies can be mnemonically identified by their primary diagnostic device – the mainmast pennant – and are (in their sequence of emission):

1. Tagged pennant
2. Single pennant
3. Botched pennant
4. Split pennant

As with any die bearing a complex design that is manually finished, there are multiple diagnostics per die that can facilitate a positive identification. Such diagnostics are critical, as the mainmast pennant was prone to obliteration by circulation wear. Other key diagnostics include the shape and locations of the various ropes. The ropes, particularly the configuration of ropes on the spritsail, pass through low-relief areas of the design. Consequently, they remain in evidence even on specimens graded About Good.

Tagged pennant

This variety has previously been identified as Pridmore 6, with a diagnostic of a missing rope that should have run from the bowsprit, across the face of the foresail, to the foremast. However, close inspection beyond the bowsprit rope configuration reveals interesting other diagnostics. For example, the pennant is essentially the same shape as seen on the “single pennant” (second of the reverse dies used) reverse, but features an extra tag of metal punched above the pennant. This makes the pennant appear to have a split end with two separated tails.

Pridmore reported this variety was known only in Proof condition, but this reverse die was also used to produce business strikes in 1793. The rope across the face of the jib would have worn away very quickly in circulation, although other diagnostics (including the sail details and the spritsail rope) may still permit a positive attribution. Curiously, circulation wear would have caused the pennant to melt into a shape that resembled a sideways “V,” which would have easily been mistaken for a “doubled pennant” by collectors. Thus, circulated business strikes would have been easily misidentified. As any reader of Pridmore’s book can tell you, proof specimens of this variety abound, yet he was unaware of any business strikes of this variety. Uncirculated business-strike specimens are, in fact, extremely rare; only two are currently known to exist, and both of those are uncirculated.

²⁰ The second reverse die, characterized by its single pennant on the mainmast, was treated to a minor repunching of some denticles, as well as repunching of some letters in BERMUDA. This practice apparently was dropped, as no coins struck from subsequent reverse dies feature any repunched features. However, these dies, instead, were treated to extensive re-engraving of the ropes and sails. This indicates that workers at the Soho Mint learned that impacts to hardened dies shorten service life, whereas engraving is less injurious.

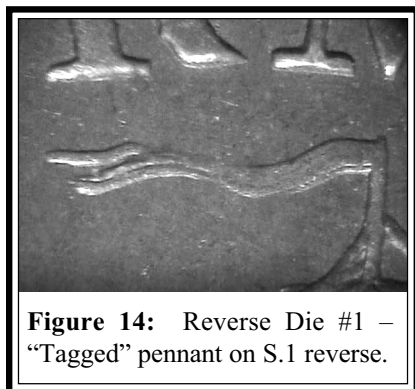


Figure 14: Reverse Die #1 –
“Tagged” pennant on S.1 reverse.

This reverse die is classified as reverse die #1, using the notation *Sportack Reverse Die #1* or *S.1 reverse*.

The spritsail rope configuration on the S.1 reverse is unique among known reverse varieties in that the spritsail rope on the extreme left is just a small stub that extends up to the bowsprit and stops there! Hardly the way one would have rigged a spritsail! The other rope extends from the top of the spritsail near its upper right tip. It then follows a perfectly straight line across the face of the bottom sail of the foremast. The rope from the spritsail on this variety also intersects the second of these loops from the left and terminates on top of the mast. In general, the spritsail rope

configuration on this variety (previously known as the Pridmore 6, with its missing jib sail rope) is shoddy in terms of execution relative to the S.2 reverse variety. The ropes demonstrate more of a workman's approach to detail than an artist's approach, and fail to realistically depict a sailing ship's rigging.

The most intriguing aspect of this reverse die variety is that it accounts for the vast majority of 1793 Bermuda copper proofs known to exist. A census at the end of this document demonstrates that all but three of the extant proofs analyzed for this study are of this variety. Thus, it is extremely likely that this variety represented the first pair of dies used, and were responsible for the 100 pre-production prototypes that Boulton sent to Brickwood in May of 1793. As such, they are most properly identified as “prestrikes” or “prototypes” and are neither regular production proofs, nor post-production restrikes as Pridmore had suggested.

Another contributing factor to the relative rarity of this die variety is that the reverse cudded early. The vast majority of S.1 reverse proofs bear evidence of a rapidly growing cud at 5 o'clock. This cud would have been adequate cause for retiring the die from service, thereby severely limiting the number of specimens struck.

Single Pennant

The single pennant variety is the second reverse die deployed, and is known paired with two obverse dies, the S.1 and S.2 obverses. This die forms the link in a chain of die pairings: it replaced the S.1 reverse after it cudded, and was mated to the S.1 obverse. The S.1 obverse was subsequently retired and replaced with the S.2 obverse. Assuming that the former Pridmore 6 reverse was, in fact, the die used to strike the prototypes, one can develop a sequence of die usage by examining die states of specimens struck from these die pairings. Consequently, this reverse die is classified as reverse die #2, using the notation *Sportack Reverse Die #2*, or *S.2 reverse*. Dealers and specialists that are familiar with Bermuda's Ship's pennies tend to agree that this reverse variety is relatively common in low grades, but extremely difficult to locate in high-grades. To date, only a single proof of this variety has been identified.

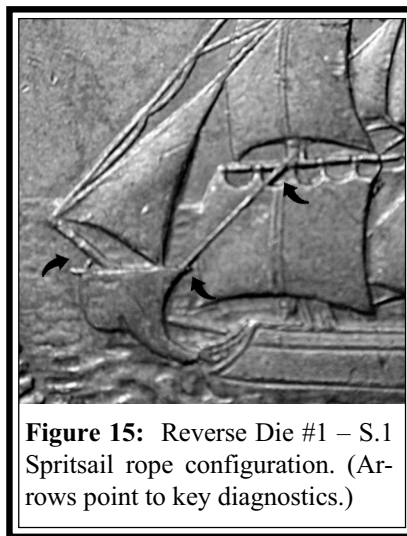


Figure 15: Reverse Die #1 – S.1
Spritsail rope configuration. (Arrows point to key diagnostics.)

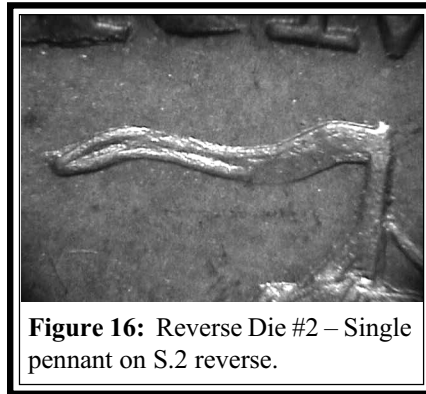


Figure 16: Reverse Die #2 – Single pennant on S.2 reverse.

The pennant on the main mast is single; it has an engraved line down the center depicting a split sail, but the ends are not separated. Consequently, (particularly on weakly struck or worn specimens) the appearance is that of a single, unsplit pennant. Unfortunately, the pennant tended to abrade quickly in circulation, thereby rendering this diagnostic useless at best or subject to imagination at worst!

Other, more durable, diagnostics are the two ropes that attach to the upper left and upper right corners of the spritsail. The spritsail is the almost square-shaped sail at the bow of the ship that hangs below the bowsprit. These

two ropes pass through low-relief areas of the coin, thereby protecting them from the ravages of circulation. More importantly, they differ in configuration and shape on the four known reverse dies. Thus, they are an important and reliable reverse diagnostic.

Figure 17 shows the spritsail rope configuration found on the S.2 or single pennant reverse.

Of the two ropes, the one on the extreme left crosses over the bowsprit and disappears behind the jib sail. The other rope extends from the right-most²¹ tip of the spritsail and runs across the face of the bottom sail of the foremast in an almost perfectly straight line with just a hint of an arc where the rope leaves the spritsail. The bottom sail of the foremast drapes down from its spar, and creates five looped gaps between spar and sail. The rope from the spritsail intersects the second of these loops from the left and terminates on top of the mast. It is important to note that the rope passes through the upper left quadrant of this loop.

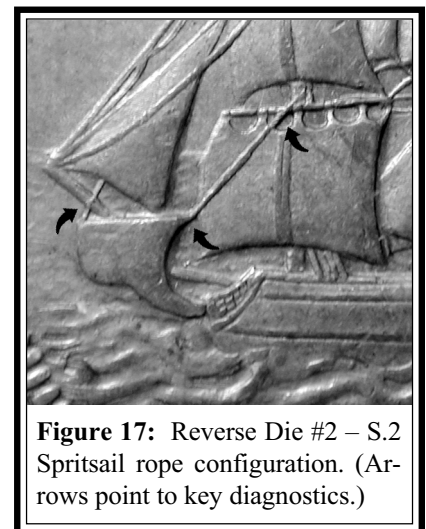


Figure 17: Reverse Die #2 – S.2 Spritsail rope configuration. (Arrows point to key diagnostics.)

Botched pennant

This variety is frequently confused with the single pennant variety, as to the naked eye, only a single pennant is visible. In fact, only under magnification of high-grade business strikes or proofs, is it obvious that the pennant isn't single! A double pennant is punched on top of a different shaped – possible single – pennant, thereby almost completely obliterating the shape of that first pennant. The double-punch is only evident at the tip of the pennant. There appears to be three tips with just a hint of separation. Consequently, this variety is frequently sold as a Pridmore 5b, or single pennant variety.

There are many diagnostics (including the pattern of double-punched date digits that is unique among the four known reverse dies) that can be used to differentiate the botched pennant from a single pennant reverse variety. However, the fastest way is to examine the alignment of the letter "R" in BERMUDA. On the botched pennant reverse, this letter is canted slightly clockwise (left tip

²¹ Directional indicators are relative to one's position and perspective. These indicators assume one is looking at the coin, as opposed to the more traditional naval directions of starboard and port. Using those terms, the short rope on the extreme left of the coin is actually on the starboard (or right) side of the ship.

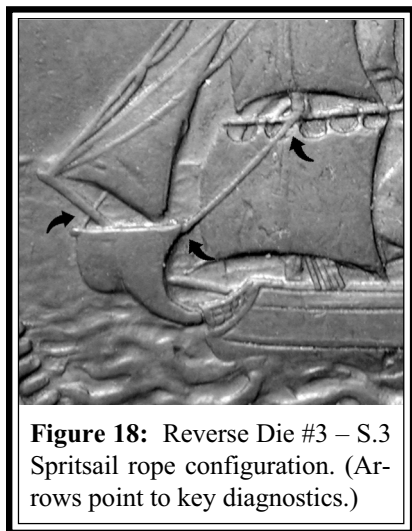


Figure 18: Reverse Die #3 – S.3 Spritsail rope configuration. (Arrows point to key diagnostics.)

of bottom serif points at top third of bottom right serif in the E, while the right leg points *under* the “M”).²²

The canted “R” and botched pennant notwithstanding, the spritsail rope configuration on the S.3 reverse features a return to both technical correctness and artistic excellence. The spritsail rope on the extreme left is the most technically accurate of the reverse varieties: it passes *behind* the bowsprit and disappears behind the jib sail. The other rope follows a graceful arc from the upper right tip of the spritsail and extends across the face of the bottom sail of the foremast. While this rope also intersects the second of

the bottom foresail’s loops, it passes through the right half of the loop. The S.1 and S.2 reverses both have this rope passing through the left half of this loop.

On high-grade specimens, another diagnostic device may be visible. The letter “R” also appears to have been punched over an “F.” Figure 19 shows the canted “R” and overpunched “F” of this variety. This reverse die is classified as reverse die #3, using the notation *Sportack Reverse Die #3*, or *S.3 reverse*. To date, this is the only reverse known paired with the triple-hubbed S.3 Obverse.

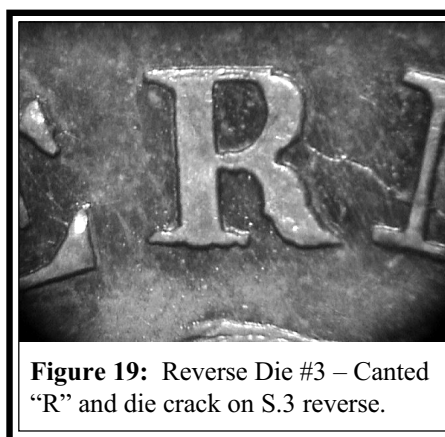


Figure 19: Reverse Die #3 – Canted “R” and die crack on S.3 reverse.

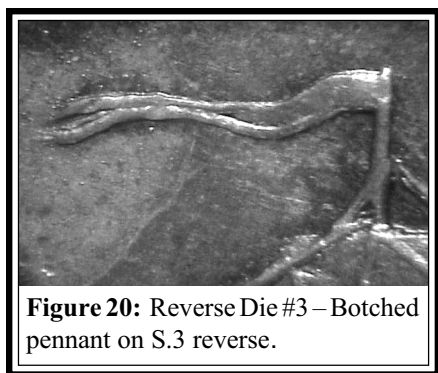


Figure 20: Reverse Die #3 – Botched pennant on S.3 reverse.

Based on a survey of extant specimens, the S.3 reverse appears to have endured a painful, and possibly protracted, service life. One need only examine a surviving specimen to realize that the reverse die was probably not properly hardened. Die chips and cuds abound on this reverse variety, and there is an obvious die crack that runs between the letters in “BERMUDA.” This crack occurred fairly early in the life of the die, and is visible in Figure 19. This crack is known to have extended through at least the letters “ERMU.”

Further injury to the die came in the form of a severe die clash that occurred after the die crack through “BERMUDA” occurred. Pridmore misidentified the clash mark as a die break, which has caused some specimens of this variety to be misattributed as Pridmore 5a solely on the basis of the clash mark. Clash marks on this variety include the neckline of George’s bust through the mizzenmast, as well as an outline of the top of his head through waves and terminating at top left corner of the “7” in the date. The clash mark through the mizzenmast is a familiar feature on this coin, and is known on many of the reverse dies. A typical mizzenmast clash mark is visible in Figure 21.

²² One must be extremely careful when using the serifs as a diagnostic device; bifurcation during striking and different post-strike events can alter their shape and position.

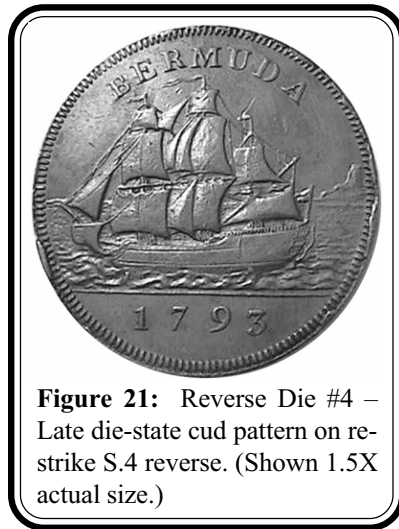


Figure 21: Reverse Die #4 – Late die-state cud pattern on re-strike S.4 reverse. (Shown 1.5X actual size.)

S.4 features a fourth combination of attributes that enable positive identification even on well-worn specimens. The spritsail rope on the extreme left looks, superficially, similar to the same rope on the S.3 reverse. However, on this variety, it passes over the bowsprit before disappearing behind the jib sail. The other rope follows a graceful arc from the upper right tip of the spritsail and extends across the face of the bottom sail of the foremast. Much like the S.3 reverse, this rope also intersects the second of the bottom foresail's loops on its right side, however it passes so far to the right, that it almost misses the loop entirely before terminating on the foremast.

This die also clashed, and examples are easily found with, and without, clash marks. The clash marks are distinct from the S.3 reverse in that only George's neckline was cut into the die surface through the mizzenmast.

Split pennant

The last of the four known reverse dies features an aesthetically pleasing pennant on the mainmast. This pennant is split and separated for approximately 60% of its length. The split is evident on all but the most heavily worn specimens. On such worn specimens, positive identification of the die may be achieved via studying the pattern of cuds through the denticles. This die saw extensive use. Consequently, it cudded heavily, and in a distinct pattern (one late phase of which is evident in Figure 21) which can facilitate die identification. This reverse die is classified as reverse die #4 using the notation *Sportack Reverse Die #4* or *S.4 reverse*, and is presented in Figure 21.

The spritsail rope configuration on the

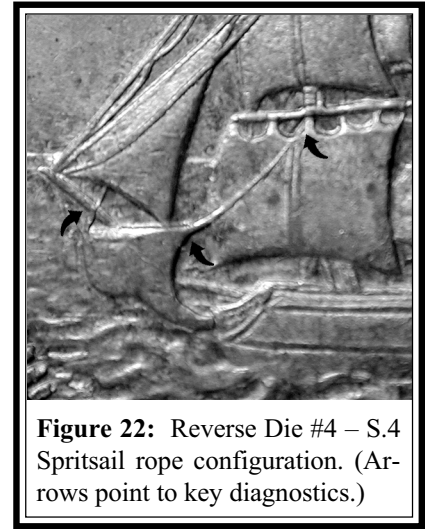


Figure 22: Reverse Die #4 – S.4 Spritsail rope configuration. (Arrows point to key diagnostics.)

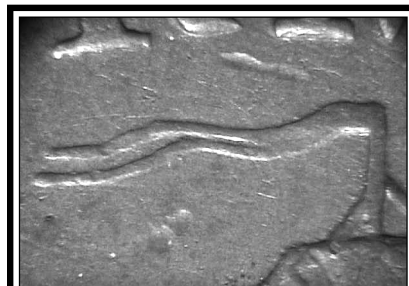


Figure 23: Reverse Die #4 – The Split Pennant of the S.4 reverse.

Die Marriages

Specific combinations of obverse and reverse dies are known as die marriages. Thus, a natural form of shorthand notation can be used to develop a catalog of known specimens by die marriage. While it is possible to begin the population of such a catalog by surveying the three largest known collections of 1793 Bermuda coppers, it would be best for this effort to be conducted under the auspices of a numismatic institution.

The following table catalogs known die marriages of all specimens. Although it is possible that new dies can be identified, the sequence of their usage *vis-à-vis* the die marriages, indicates that the catalog is likely complete as far as die varieties are concerned. Until the catalog is known to be complete, it would be safer to identify specimens using the sequence numbers of the obverse and reverse die combinations rather than just a single-digit, die-marriage sequence number. Otherwise, confusion may result from die marriage sequence numbers changing over time.

Known Die Marriages	Obverse Die S.#	Reverse Die S.#	Pridmore Designation	Known with Clash Marks?	Known in Proof?
1	1	1	6	No	Yes
2	1	2	5b	No	Yes
3	2	2	5b (Note)	Yes	No
4	3	3	5b (Note)	Yes	Yes
5	4	4	5a	Yes	No
6	Modified 2	4	Not designated	Yes	No
7	5	5	7	No	Yes
7	Modified Die 5	5	8	No	Yes
7	Late Die State and Further Modified Die 5	5	9	No	Yes
8	6	5	10	No	Yes
9	7	5	11	No	Yes
10	8	5	12	No	Yes

Note: If the mainmast pennant is worn away and there are clash marks, this variety may be misattributed as a Pridmore 5a.

Many of the obverse die diagnostics for production strikes are extremely subtle (even more so than the reverse diagnostics) and prone to obliteration by even light circulation wear. As a result, new die marriages are only likely to be found by examining proof, uncirculated, or almost uncirculated specimens. The potential for new die marriages to be identified lies mainly in the transitions between these existing obverse and reverse dies. For example, unless a severe clash occurred that simultaneously destroyed both dies, it doesn't seem likely that Obverse Die #2 expired at the same time as Reverse Die #2. Consequently, it is possible that either Obverse Die #2 was paired with Reverse Die #3, or that Reverse Die #2 was paired with Obverse Die #3, depending on whether Obverse S.2 or Reverse S.2 was retired first. Given the extensive die cracking evident through the lettering of the S.2 Obverse, it seems much more likely that this die was retired before the S.2 Reverse, thereby making a 3/2 pairing probable, but not yet attributed in a surviving specimen.²³

Similarly, another possible die marriage can exist. Depending on whether Reverse S.3 or Obverse S.3 survived longer, one can expect that either a 3/4 pairing or a 4/3 pairing exists, and awaits discovery. Having already seen that the S.3 reverse was so flawed (it clashed, chipped, cudded, and cracked early), it seems very probable that a 3/4 pairing exists and awaits discovery. Another possible reason why such mid-production transitions do not exist is that manufacture was episodic. Continuity of production could have been disrupted due to sporadic delivery of batches of copper and/or mechanical failures. Depending on how much downtime was incurred, any idle die(s) may have rusted and been retired.

²³ The probability of the S.3/2 pairing was reinforced with the discovery of the fancy letters S.2/4 specimens. Those late-production specimens still bear the pattern of die cracks through GEORGIVS, and had advanced little from the die state witnessed on an original S.2/2 coin in the author's collection. Clearly, the S.2 obverse was retired from active duty shortly after the die cracks were discovered. This means that specimens struck from a 3/2 pairing likely exist, but have yet to be attributed.

The following table contains a census of known and verified specimens struck from the original eight dies (four obverse, and four reverse). The data points have been stratified by die pairing and condition. Emphasis has been placed on accuracy rather than completeness, so many specimens known to exist, but not available for inspection, have been omitted.

Census of Extant Specimens

Die Pairing	VG and Below	F	VF	EF	AU	BU	Proof	TOTALS
S. 1/1						2	12	14
S. 1/2							1	1
S. 2/2	21	1			2	2		26
S. 3/3	12	1			3		2	18
S. 4/4	9	4	3	4	5	3		28
S. 2/4	2					1		3
TOTALS	44	6	3	4	10	8	15	90

The preceding census represents three of the largest, privately held collections of 1793 Bermuda Coppers in North America, as well as individual specimens from around the world. Two of these collections were built by accumulating all specimens encountered, rather than cherry-picking for variety or condition. Thus, the distribution within this sample should correlate nicely, if imperfectly, with actual survival rates of the entire population. To better illustrate the relative rarities of conditions and die marriages within the sample population, the following table expresses the absolute data from the preceding table as percentages. Rounding at, and beyond, the third decimal position may slightly affect the totals.

Census of Extant Specimens Expressed as a Percentage

Die Pairing	VG and Below	F	VF	EF	AU	BU	Proof	TOTALS
S. 1/1						2.22%	13.33%	15.55%
S. 1/2							1.11%	1.11%
S. 2/2	23.33%	1.11%			2.22%	2.22%		28.88%
S. 3/3	13.33%	1.11%			3.33%		2.22%	19.99%
S. 4/4	9.99%	4.44%	3.33%	4.44%	5.55%	3.33%		31.08%
S. 2/4	2.22%					1.11%		3.33%
TOTALS	48.87%	6.66%	3.33%	4.44%	11.1%	8.88%	16.66%	100%

Interpreting the Data

The tabular data presented in the preceding tables demonstrate some remarkable trends that may have been intuitive to specialists, but can now be made explicit and quantified. First, the majority of extant specimens are on opposite ends of the spectrum: they are either well worn or AU/BU or proof. Very few pieces are available in the traditional collector grades of Fine, VF and EF. Second, surprisingly uncirculated business strikes are more difficult to locate than proofs! Both observations are symptomatic of an era when money was used, rather than collected.

The Preponderance of S.1/1 Proofs

As indicated earlier in this article, the data in this census table demonstrate that one die marriage accounts for the vast majority of surviving proofs! It is also virtually unknown in business strike form, and no circulated specimens have yet been located. This die marriage, known as S.1/1 – the former Pridmore 6 – accounts for 12 of the 15 known and attributed proofs in private hands today.²⁴ This lopsided proportion of proof die varieties in combination with the lack of circulated specimens, indicate that the S.1/1 die marriage probably was used to manufacture most of Boulton's 100 pre-sale prototypes. Given that these prototypes were intended to clinch a deal, it isn't so difficult to believe that the S.1 reverse die was retired as soon as they noticed it cudding. Thus, the second reverse die was pressed into service to complete the batch, which would explain both the existence of S.1/1 and S.1/2 proofs, and their rarity.

The two uncirculated business strikes and complete lack of circulated specimens support this theory. Given that both are struck from very early die states, it may well be that the uncirculated business strikes were trial strikes; made to ensure that all moving parts of the press were in alignment. Such strikes wouldn't have been made under full striking pressure, nor would they have been done with specially prepared flans. At least one of these two known specimens exhibits proof-like fields, but is a soft strike. Thus, it is possible the dies were polished in anticipation of producing proof specimens. Under magnification, this specimen is softly struck; the letters are soft and rounded rather than sharp-edged as they are on proofs.

A potentially contravening datum not evident in the preceding matrices is that the vast majority of all S.1/1 proofs located, examined, and attributed to date are the plain copper variety. Only one bronzed specimen has been located.

Numerous S.1/1 specimens exhibit a grease-fill error on the obverse, which indicates the initial production run was discontinuous. It stretches one's imagination to think that Boulton couldn't come up with three pounds of copper for his prototypes, so another reason must exist that can explain the discontinuity of this initial production. Perhaps a mechanical failure forced a premature, but temporary, halt to the production of the prototypes. Regardless, the obverse die must have been packed in grease and then incompletely degreased before production of the prototypes resumed with the S.1/1 pairing. Consequently, the denticles on several proofs are smeared into oblivion between 4 and 6 o'clock. The majority of the S.1/1 proofs do not exhibit this error.

It is evident from surviving S.1/1 specimens that the reverse die cudded, and was probably retired before the 100 prototypes were completed. When production of the prototypes resumed, with the die pairing identified as S.1/2, the obverse die was thoroughly degreased. The denticles previously obliterated are quite distinct on the only known proof from this die marriage, which proves the obliteration on certain S.1/1 specimens was caused by grease, rather than physical die damage. This theory, while nearly impossible to definitely prove or disprove, also explains why the S.1/2 pairing exists, and is so rare in proof.

²⁴ Far more proofs exist than are represented in this census. There are two in the Smithsonian collection, as well as other museums around the world. There have also been unconfirmed reports of a private, anonymous collector in the UK with 10 proofs. These specimens have been omitted from the census solely because they could not be accurately attributed. It is highly likely that a large percentage of the original prototype S.1/1 specimens still exist.

The Mid-Production Proofs

Having posited the S.1/1 and S.1/2 proofs as pre-production prototypes, a more nettlesome issue to explain is the mid-production proofs. Specifically, proofs are known at vastly different die stages of the S.3/3 pairing. The original purpose of such contemporary, mid-production proofs remains unclear. One can hardly believe that a proper British gentleman would have sought such base metal specimens for his cabinet in the 1790s. The reason(s) for their production are unrecorded, but one could speculate that Boulton intended them as “free samples” to stimulate additional business. Evidence for that assumption can be gleaned from yet another letter from Brickwood to Boulton. This one, dated 22 May 1806, expresses John Brickwood’s thanks to Boulton for the specimens of his new coins. In 1806, the Soho Mint was actively producing copper coins for another remote British colony: Bahamas. Thus, it appears that Matthew Boulton was testing for interest in a second production run of Bermuda coppers by sending Brickwood samples (possibly proofs) of his 1806 Bahamas coppers. He had already demonstrated his willingness to tease a potential customer into commitment with a delivery of proof coins when he shipped that sample of 100 pre-production specimens to Brickwood in May of 1793. The theory certainly fits his *modus operandi*. It also explains why a small number of proofs exist that were struck from different die pairings during the production of these coppers in 1793.

Regardless of their reason for being, the fact that so few exist relative to the S.1/1 variety, and the fact that they were made from multiple die pairings, and even different die states within those pairings, obviate their having been made as part of the pre-production sample. Thus, only the S.1/1 (former Pridmore 6) die pairing could have been used to strike the majority of those prototypes.²⁵ Based on current survival ratios, it seems unlikely that more than 10 to 15 mid-production proofs were struck. Thus, there may have been approximately 110 to 115 proofs made in total; 50 copper S.1/1, 50 bronzed S.1/1, and a minute quantity of copper and bronzed proofs from the remainder of the die pool.

An interesting, but purely collateral, numismatic legacy of the mid-production proofs is the existence of proof-like 1793 Bermuda business strikes. These were made shortly after the dies were polished to make a proof. They can be distinguished from true proofs by carefully examining the lettering under high magnification. True proofs feature very sharp edges on the letters. Proof-like business strikes have mirrored fields, but a softer strike that is evident in the lettering.

The market for 1793 Bermuda Coppers hasn’t experienced the same degree of maturation as the U.S. Morgan Dollar series. Consequently, no premiums are yet paid for proof-like specimens.

Quality vs. Quantity: Boulton’s Inverse Relationship

The Soho Mint has a legendary reputation for quality. Their reputation, born of Boulton and Watt’s innovativeness and skillful use of steam-driven machines, is not unjustified. Their products were truly a quantum leap beyond any and all contemporary competitors – including the Royal Mint! However, it is important to put this reputation into the proper perspective. Quite simply, Boulton and Watt were human. More importantly, they were businessmen. High quality products may have been their trademark, but their products were far from perfect. Witness the demonstrable disparity between Boulton’s boasts to Brickwood about their manufacturing tolerances: Boulton claimed a manufacturing variance of one-half of one percent whereas the best that the Tower Mint could do was one part in forty (2.5%). Yet, carefully weighing uncirculated and proof specimens reveals that his tolerances were actually around 5% plus-or-minus!

²⁵ Pridmore had an inkling of how rare these mid-production proofs were. In an addendum to his book that was dated August 1966, he identifies the market price of a 5A proof as £20, whereas a Pridmore 6 proof was only £15.

Many numismatists today continue to labor under the misperception that the Soho Mint was infallible when it came to minting high-quality coins. The truth is, they were capable of producing coins that almost rival modern coins in terms of strike and appearance, but not precision of weight. The truth is, their coins demonstrated a beauty that could only be imparted by an artisan's careful touch, but their manufacturing was sufficiently burdened by manual processes that the individual dies from which the coins were struck are readily discerned. The truth is, they were capable of producing some incredibly high-quality products, but they weren't government-subsidized so quality control frequently took a backseat to cost containment.

The 1793 Bermuda copper is no exception. Tracing through the coinage by die variety and marriage, one can see an inverse relationship between quality and quantity. The rarest specimens of all appear to be those struck from the S.1/1 and S.1/2 die pairings while the S.2/2, S.3/3 and S.4/4 pairings are the most common business strikes in this issue. Given that these dies are numbered in their emission sequence, it is generally true that the earliest struck coins are the rarest, and the later struck coins are the most common. More intriguing, the highest quality pieces (in terms of strike, rather than preservation) are the earliest die pairings as well.

That's not to suggest that there are no high-quality strikes from the S.3/3 or S.4/4 die pairings. On the contrary! Many high-quality strikes exist from the full spectrum of die pairings. However, the S.3/3 and S.4/4 die marriages experienced a service life far in excess of any previous pairing, much to the detriment of overall quality of the coins produced from those dies. Thus, it appears that the emphasis during the early stages of production was on quality control. Evidence supporting this claim is that the early dies were retired as soon as they exhibited signs of wear or damage.²⁶ That contrasts starkly to the latter die pairings. In those pairings, die flaws are commonly encountered. One can only conclude that the Soho Mint was trying hard to finish the job under budget. The last two pairs of dies appear to have been run long after their service life should have ended. This is evident not only in the census, but in the high percentage of specimens that exhibit cracks, chips, cuds, clashmarks, and advanced die wear. The last die pairing (modified S.2/4) even features the almost complete obliteration of fine detail on the modified S.2 Obverse in the process of restoring that die to a serviceable state to finish production. Clearly, Boulton intended to complete his contract with Brickwood without cost overruns. Quality suffered commensurately.

Conclusion

The 1793 Bermuda copper offers numismatists more variety, intrigue, and challenge than one would initially believe possible in a one-year type coin. Despite its relatively high mintage, it seems unlikely that more than 1,000 still exist in all grades – vast numbers having been melted for their copper. Such acts were motivated by the escalating price of copper causing the coins to have a tangible value far in excess of their face value, as well as the fact that war on the high seas meant a reduction in the availability of copper in Bermuda at any price!

One must remember that, owing to the extreme scarcity of pristine specimens, this study is based on a fairly limited number of coins, *vis-à-vis* research of historical records and documents. Additional die marriages may well be discovered in the future, most likely the S.3/2 and possibly even the S.3/4 pairings. In total, nearly 100 specimens were examined either personally, or via digital pictures. However, that includes a large number of the extant high-grade specimens, and a nice sampling of well-used pieces, too! The die classification scheme posited in this article, is a direct product of technologic advance. Without high-quality optical tools, it would have been

²⁶ The S.1 Reverse was retired early after cudding at 4 o'clock, and the S.2 Obverse was retired after cracking through RGIV in GEORGIVS.

infinitely more difficult to isolate individual die diagnostics. Similarly, the Internet and various digital computer technologies have been indispensable in locating and acquiring high-grade specimens, cataloging and classifying dies and die marriages, not to mention sharing digital images of coins amongst the small cadre of hard-core 1793 Bermuda copper collectors. These are the tools that I have been privileged to employ, and recognize that were simply not available to Major Pridmore. I am indebted to him for having conducted the seminal research into this intriguing coinage, thereby creating a base of knowledge on which to build. **CNL**

Acknowledgements

Many people shared generously of their time, energy, knowledge, and personal resources. Without their unhesitating contributions, this article would not have been possible. Having said that, I am specifically indebted to:

My wife, Karen, and my children Adam and Jennifer for, yet again, providing unconditional love, patience, and support during a time-consuming research project.

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Gary Trudgen, for all that he did to help transform my research notes into this article, including countless editorial reviews, help and advice on digital photography, not to mention all of the behind-the-scenes work that he does to convert everything to the *CNL* format. There aren't many editors that would open their home to a weary traveler, serve him a marvelous home-cooked meal, and then take pictures of coins for an article. Again, thanks Gary, for everything!

Greg and Renell Dubay, fellow devotees of the 1793 Bermuda copper, and all-around wonderful people! I owe Greg and Renell a debt of thanks for generously sharing of their personal time, and for their gracious hospitality.

Dr. Richard Doty, for generously sharing his research notes and extensive personal knowledge of the Soho Mint, its owners, products, and operations.

Colin M. Curtis, a delightful gentleman and businessman from Bermuda. Colin sold me my first five specimens of 1793 Bermuda coppers, including 4 proofs and the uncirculated S.2/4 fancy letters specimen. He deserves the credit for my initial fascination with this coinage, and for going out of his way to build up my collection.

Jeffrey S. Zarit, Professional Numismatist, Dallas, Texas. Mr. Zarit has kindly supplied high-quality photographs of the "Pridmore 7" copper proof illustrated in Figure 2 of this article.

The French Colonies Sou of 1767

A Summary and Final Installment – Part VII

by

Robert A. Vlack; Brookfield, CT

Editorial Note

In the first issue of *The Colonial Newsletter*, which saw the light of day in October 1960, its founding editor, Al Hoch, outlined in his introductory comments the purpose of the publication as a vehicle for the “exchange information, opinions, data, and discoveries concerning Early American coinage, particularly in respect to die varieties.” This new journal directed toward colonial enthusiasts was well received, and a year later, patron Bob Vlack proposed a rather unique idea. Rather than to wait until a manuscript was completely finished before publication, Bob envisioned a running research article on a particular subject whose progress would be published at intervals thus permitting other collectors to submit their input and contribute to its development. Then, after all the available material was tied up in a neat little package, other supporting data and historical concomitants could be added to support the finished product. This was at a time in the 50s and 60s when, in a recent discussion, Bob reminisced that there were only about five or six serious colonial collectors.

To initiate his new idea, Bob started a series in October 1961 on the French Colonial Sou of 1767, a subject which he had been researching. Although six installments were published through January 1967, he still had not exhausted his information, with more die varieties being reported. With this current issue, Bob completes the chapter on the French Colonial Sou of 1767, which, in the opinion of James C. Spilman, will make it the longest running colonial numismatic research project! In this final installment, we will condense the prior articles into a single presentation for the convenience of our readers. May I hasten to add, that the format of the open-ended research article has proved to be a popular and useful communication tool within *CNL* by promoting a continuing dialogue between patrons.

In 1762, France ceded the Louisiana territories to Spain, and by the Treaty of Paris the following year, all French possessions on the North American mainland passed to England. Thus the 1767 French Colonies Sou is just as the name implies, a generic copper coinage issued for French colonies in general with no specific tie to Louisiana or French Canada since any official connection had been dissolved before the time that the coins were minted.¹ Acknowledging this lack of specificity, the coin has been listed in the Guide Book under “French Colonies in General.” Without doubt, some pieces, like many other coins of the period, may have incidentally arrived in those locations in the pockets of travelers or sailors – but not in any scale supporting a purposeful circulation.

In accordance with an edict of October 1766 authorizing the coinage, 1.6 million one sou [sol] pieces of 12 deniers were minted for the French Caribbean colonies at the Paris mint.² In Guadeloupe, these heavy coppers were initially refused by the people and remained uncirculated in the treasury until 1793 when, due to a shortage of small change during the Revolution, they were counterstamped with “RF” [République Française] and reissued as three sous nine deniers. This appreciable 375% increase in value apparently did a lot to encourage popular acceptance since so many survived in well-worn condition. In recognition of the colonial governor who orchestrated the revaluation scheme, these countermarked coppers became known by the nickname of “collots.”³

1. Michael Hodder, “An American Collector's Guide to the Coins of Nouvelle France,” COAC, *Canada's Money*, Nov. 7, 1992, p. 8.

2. Victor Gadoury and Georges Cousinié, *Monnaies Coloniales Françaises*, 2nd edition (1988), pp. 19, 172; Walter Breen, *Complete Encyclopedia of U.S. and Colonial Coins* (New York, 1988) pp. 57, 58.

3. F. Pridmore, *The Coins of the British Commonwealth of Nations*, Part 3, West Indies (London, 1965), p 228.

Vlack⁴ estimates that from 60% to 75% of the issue were counterstamped as “collots” – a number in line with Hodder’s impression.⁵ However, in his study, Bob found three varieties in which all examples he located had been marked with the “RF.”

In Part I of his series,⁶ Bob noted that there were nine recorded varieties of these 1767 coppers. By the time Part II was published barely three months later,⁷ six more had been added to the tally. There were no new discoveries in the third installment of the article,⁸ but one more was discovered by the time of Part IV of the study.⁹ Two additional varieties were mentioned in Part V in March 1965 for a grand total of 18.¹⁰ In that issue, Bob mentioned that he had not yet located a 4-D or 12-L without a counterstamp. In the last installment where he described 14-E, 15-I, and 16-F, he felt that he was coming to the end of the series and for his last article proposed to finish with 4-D, 12-L, 17-B, and 18-N. To this he would add the fifteen different RF counterstamp punches with a listing of all known varieties and combinations with punches. (See Figure 1, page 2298.) Between 1967 and 2001, four more new varieties were described bringing the grand total to 22.

In this the seventh and final part, all previously described varieties will be repeated although a few minor differences will be noted in some of the prior descriptions. Unfortunately Bob does not have pictures for some varieties [obverses 15, 16, 19, 20, and combination 21-O]. This was a situation where he saw the coin in private collections, described it, but did not get a picture at the time. [**Challenge to CNL Patrons:** If you have access to one or more of the preceding varieties that are missing photos, please submit a photo or photos to CNL for publication. If you need help obtaining photos, CNL would be happy to assist.]

The 15 RF counterstamps are designated with letters A to O. Of these, three combinations, 4-D and 12-L, already mentioned, and a new one, 19-E, all appear punched with an RF. The patterns for the RF are neatly diagrammed in Figure 2, page 2299, where the number of “dots” surrounding the RF are written at the bottom of each design.

Now for the concluding Part VII. **PLM**

Note: All 1767 sou photographs are shown approximately 1.5 times the actual size of the coin.

4. Personal communication, 27 July 2001.

5. Personal communication, 27 July 2001.

6. CNL, sequential pages 39-40, Oct-Dec 1961.

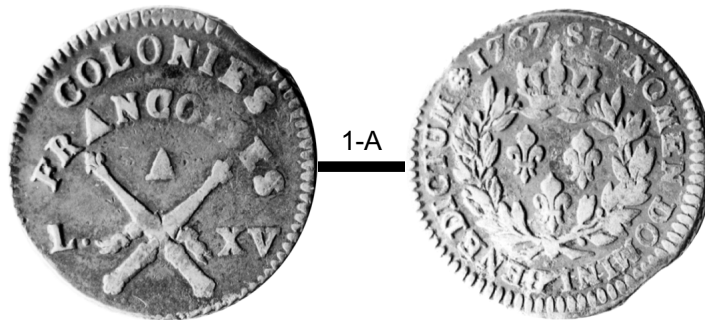
7. CNL, sequential pages 46-47, Jan-Mar 1962.

8. CNL, sequential pages 56-57, April-June 1962.

9. CNL, sequential pages 68-70, Dec 1963.

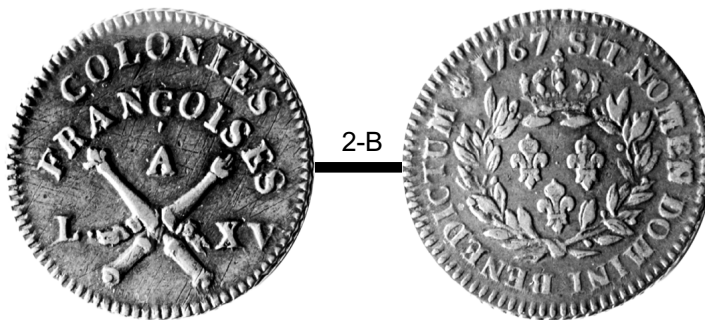
10. CNL, sequential page 133-35, March 1965.

FRENCH COLONIES
1767 Sous



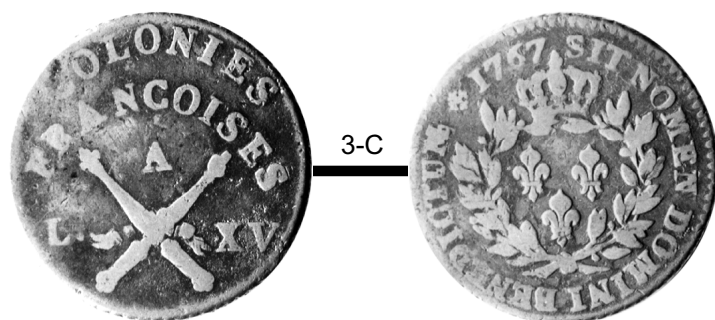
VARIETY 1-A Obverse 1: In COLONIES, C is low, L is slightly high and closer to 1st O. S leans right. In FRANÇOISES, R is high and leans right, last S leans right. In L. XV, L leans left, period slightly high and midway, apex of V is slightly below base of X. Break later connects OL near base.

Reverse A: In SIT, I leans left with T low. D in DOMINI is low and leans right, 1st I leans left and touches M at base. 2nd I parallel with N. In BENEDICTUM, N leans right, D is closer to I, and M leans right. Top of crown closer to S. Leaf ends under right center of 1. A break connects the I and B at bottom, with a period-like break under the B.



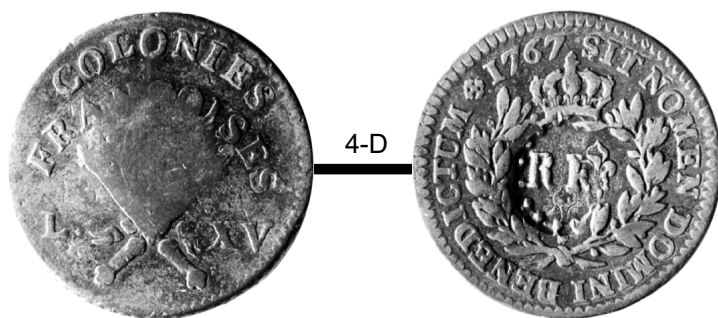
VARIETY 2-B Obverse 2: In COLONIES, 2nd O slightly high, I slightly high and leans right. In FRANÇOISES, R is slightly high and leans right, C is low, last ES high and slightly distant from 1st S. In L. XV, period high and closer to arms, X leans slightly left, and left upright of V is slightly higher than right upright.

Reverse B: SIT normal, M in NOMEN slightly low. DO in DOMINI close. N and D in BENEDICTUM lean left. Top of crown closer to S. U is closer to T and is parallel with T. Leaf ends under left tip of 1. Right side of crown not connected to center upright.



VARIETY 3-C **Obverse 3:** In COLONIES, I closer to N and leans right, S is low. In FRANÇOISES, R slightly high and leans right. Widest spacing between A and N, N leans right, C leans slightly left, E is closer to last S. In L. XV, period is high and midway. "A" mintmark leans left.

Reverse C: In SIT, T is low, I closer to T. In NOMEN, last N recut. In DOMINI, last I low. In BENEDICTUM, B is low and leans left, D is high and leans left, and breaks occur around E, U, and M. M is recut. Top of crown midway and extends half way up height of legend. Leaf ends under extreme left tip of 1.



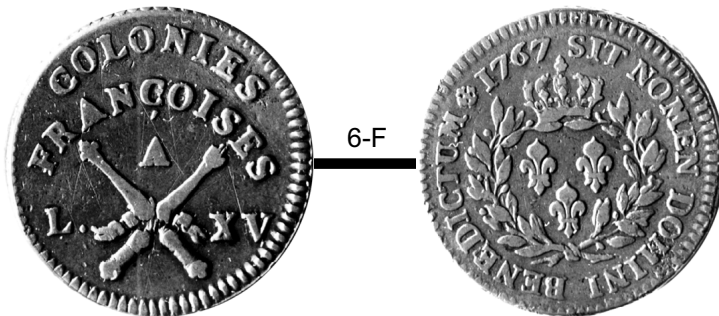
VARIETY 4-D **Obverse 4:** In COLONIES, L is high, N slightly high and leans left, S low. In FRANÇOISES, R is slightly high and leans right, last S slightly low with break at the upper right. In L. XV, period slightly high and midway, left upright of V below top of X, and apex of V below base of X.

Reverse D: SIT about normal. In NOMEN, M slightly high. In DOMINI, 1st I low and connected to M at the base, 2nd I slightly high. In BENEDICTUM, B leans right, D is low and closer to E, I is high and leans slightly right, and T leans right and is close to U on top. Top of crown is about midway. Leaf ends under right center of 1.



VARIETY 5-E Obverse 5: In COLONIES, NI is high with the I slightly closer to N. End of right base of E may be defective. In FRANÇOISES, C is closer to O, E leans right. In L. XV, period is closer to arms, the L, X, and V lean slightly left. "A" mintmark leans strongly left.

Reverse E: In SIT, T is low. NOMEN normal. In DOMINI, DOM is widely spaced, MI is close and connected at the base, the 2nd I is high. In BENEDICTUM, D is slightly low and leans right, I is slightly high and leans left, U is closer to T, I develops a break on top. Breaks also later connect the U and T to the wreath. Top of crown is slightly closer to the S. The 1 is slightly distant from 7 and leans left. Leaf ends under the left side of the 1.



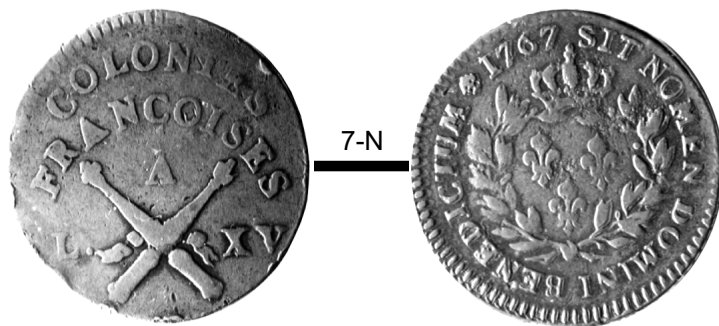
VARIETY 6-F Obverse 6: In COLONIES, 2nd O slightly closer to L, S is low. Upper and lower ends of C may be connected. In FRANÇOISES, R is high and leans right, left upright of N is low, and I is slightly high. Upper and lower ends of C may be connected. In L. XV, L leans left, period is midway, and base of X may be connected across the bottom.

Reverse F: In SIT, I leans slightly left. In NOMEN, left upright of both N's are low. In DOMINI, D is large, 1st I is slightly high, 2nd I leans left and is parallel with N. In BENEDICTUM, 1st E slightly low, D is large, and M leans right. Break or misplaced I between the E and D. T leans slightly right. Top of crown is slightly closer to S and is level with base of legend or just slightly above. Final 7 is slightly low. Leaf ends under left center of 1. Right side of crown not connected to center upright.



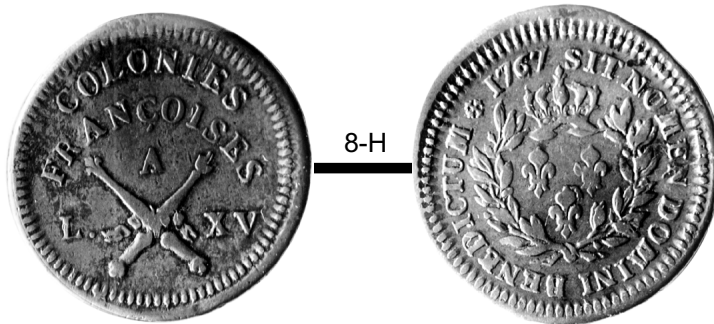
VARIETY 7-G **Obverse 7:** In COLONIES, C is low, L is high and closer to 2nd O, I is high, and S leans slightly right. In FRANÇOISES, R is high, A leans left, and 1st S leans right. The cedilla touches the bottom of C. In L. XV, the L leans slightly left, the period is slightly high and closer to the arms. A chip break occurs near the lower right corner of the "A" mintmark.

Reverse G: In SIT, I and T lean slightly left with T slightly low and almost parallel with the I. The top of the T may be defective at its center. In DOMINI, the M and I are connected at the base, with final I almost parallel with the N. In BENEDICTUM, the I, C, and T lean left. Top of crown is closer to S. Leaf ends under the left center of 1.



VARIETY 7-N **Obverse 7:** Same as above.

Reverse N: Very similar to Reverse G. In SIT, I leans very slightly left. NOMEN normal. In DOMINI, MI connected at the base. In BENEDICTUM, D is low, I high, T leans strongly right and is parallel with U. No cross serifs appear on top of U. Leaf appears to end under left side of 1. Top of crown closer to S. Right side of crown not connected to center upright. Specimen observed showed a double striking of the reverse.



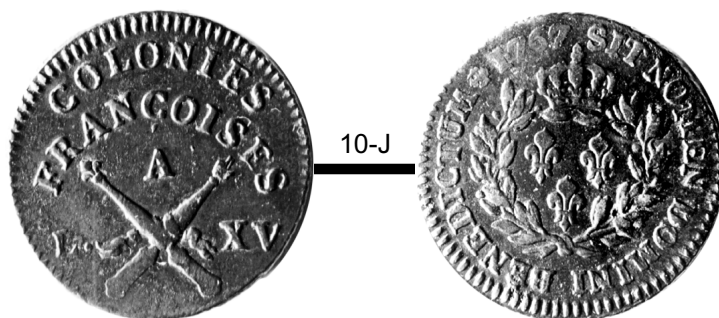
VARIETY 8-H Obverse 8: In COLONIES, 1st O slightly low, L leans slightly right, S is low. In FRANÇOISES, R and A slightly high, N and C lean left, C is closer to O, 1st S low, 2nd S leans right. In L.XV, L leans slightly left with period midway. V lower than X.

Reverse H: In SIT, T slightly high. In NOMEN, O closer to N, NO recut, OM slightly high and M leans right, E slightly high. In DOMINI, the M and I's lean left, and the N is slightly low and leans right. The N and I are parallel with the top of I higher than N. In BENEDICTUM, 1st E is low and leans slightly left, D large. I leans left and slightly closer to C, U is slightly high and closer to T. The C and T are connected on top. Date is closely spaced with top level higher than top level of SIT. 6 recut. Leaf ends under left upright of 1. Top of crown is much closer to S. Break through 2nd N of NOMEN to wreath, another at top right of lower fleur in center of wreath.



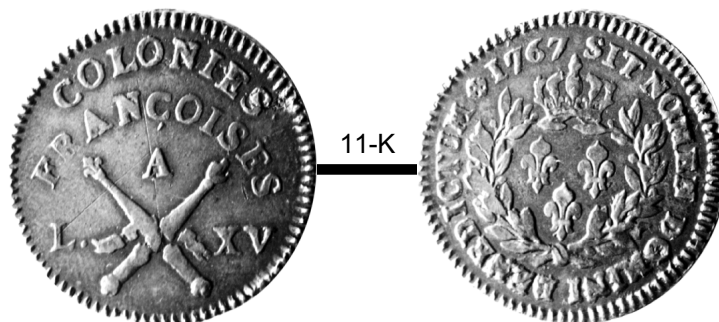
VARIETY 9-I Obverse 9: In COLONIES, N is high and leans left. IES on a different plane than COLON. S leans slightly right. A break develops through left upright of N to rim. In FRANÇOISES, R slightly high and leans right, N is high and closer to C, E is high and closer to 1st S. Base of E may be missing leaving an F appearance. In L.XV, the L is on a higher plane than XV and leans slightly left. The period is high and about midway. The XV spaced further apart than usual and slopes down to the left.

Reverse I: In SIT, I leans left, T slightly low. In NOMEN, M leans right, E slightly high and also leans slightly right. In DOMINI, D leans slightly left, the M and I are connected at the base, 2nd I leans left. In BENEDICTUM, D and C are slightly low, U is closer to T, and M leans right. Right side of crown may not be connected to center upright. Leaf ends about under the center of 1.



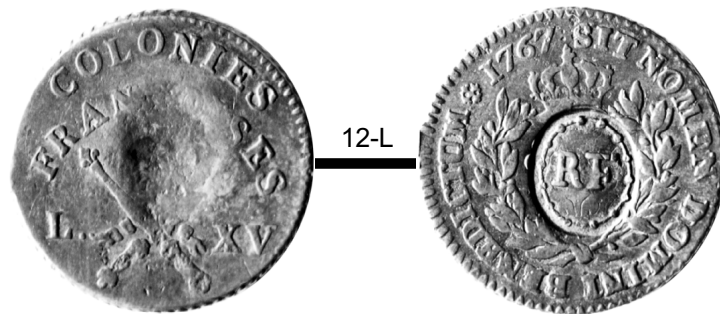
VARIETY 10-J Obverse 10: In COLONIES, letters neatly spaced. Base of L high, N recut on sharp specimens. E leans slightly right. In FRANÇOISES, F very low and leans left. N leans left, E high and closer to 2nd S at base. Final S low and leans right. In L.XV, L leans left, period closer to arms and is high. Apex of V is below base of X with right upright of V below left upright and appears defective on top. "A" mintmark leans left.

Reverse J: SIT normal. In NOMEN, O slightly closer to N, M leans slightly left, left base of N's extend below legend. In DOMINI, O closer to D, 1st I high, N leans slightly right, and 2nd I about parallel with N. In BENEDICTUM, 2nd E low, D is large, T low, and U leans slightly left. Leaf ends under left upright of 1. Top of crown is closer to S. Die break occurs between 1st E of BENEDICTUM and rim.



VARIETY 11-K Obverse 11: In COLONIES, C leans slightly right, both O's lean right, L and O close, I leans slightly right, base of E below I and S. In FRANÇOISES, R leans slightly right, A slightly high, E high and leans right. In L.XV, base of L curves down to the left, period midway. X very slightly below V and leans slightly left. Chip breaks occur after S of COLONIES and above E of FRANÇOISES.

Reverse K: In SIT, S is high, I leans slightly left. NOMEN about normal. In DOMINI, O slightly closer to M. In BENEDICTUM, widest spacing between DIC with I high. M leans slightly right. Leaf ends just past the center of 1, which is slightly high. The 7's are different with the serif of the 1st 7 extending too far down. Top of crown is slightly closer to S. Breaks occur between OM of NOMEN and in letters OMINI and BENED. Also between the wreath and M of DOMINI. Specimen observed was on a thinner and slightly wider planchet.



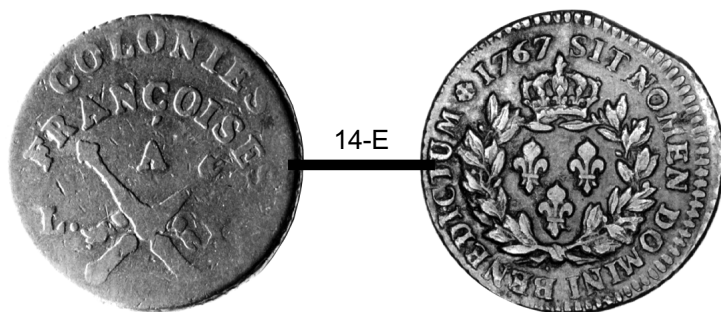
VARIETY 12-L Obverse 12: In COLONIES, letters well spaced with 2nd O high, I leans slightly right. In FRANÇOISES, R leans right, E high and leans left, final S leans right. In L. XV, L on a higher plane than XV, and leans slightly left. Period slightly closer to arms. X slightly higher than V.

Reverse L: In SIT, I leans left, T low. In NOMEN, final N leans left and not on curvature of legend. In DOMINI, D too high, M leans left, final I about parallel with N. In BENEDICTUM, I is high, CT touch with T leaning slightly left, M slightly low and leans left. Leaf ends under the center of 1. Top of crown is closer to S. Legend is recut and is most apparent around NOMEN, DOMINI, and ENE of BENEDICTUM.



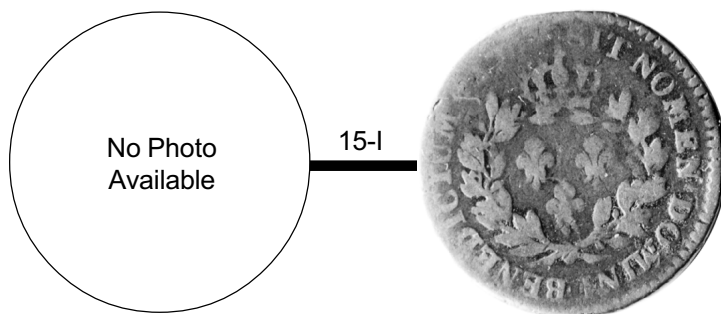
VARIETY 13-M Obverse 13: In COLONIES, C leans slightly right, N leans left, S is low. Break or recutting shows at bottom right of S. In FRANÇOISES, FR close, A leans left and is slightly low, S's lean right, E is high. In L. XV, period closer to L and not as close to arms as other varieties. X leans down to the left. "A" mintmark leans slightly right.

Reverse M: In SIT, I leans left. In NOMEN, M leans right. In DOMINI, N slightly high and leans slightly left. In BENEDICTUM, BEN almost on straight line, ED also. D is slightly low and closer to E. TU slightly low and in a straight line. Leaf ends under left upright of 1, final 7 slightly low. Top of crown closer to S. Break from bottom of 1st I of DOMINI through center of left upright of N.



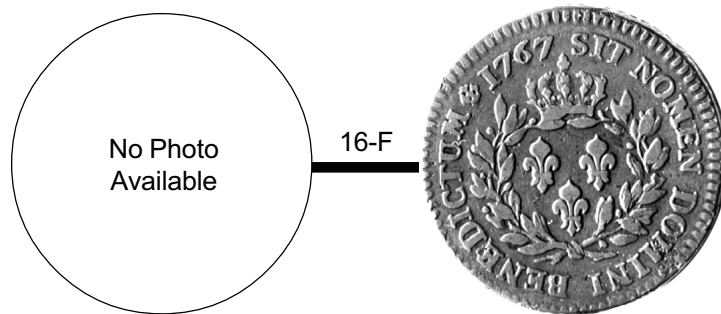
VARIETY 14-E Obverse 14: In COLONIES, 1st O slightly closer to C, 2nd O slightly closer to L, I slightly closer to E and about parallel with E. In FRANÇOISES, A is low and leans left. OI close, 1st S slightly high and leans right. Break across top of A which probably extends through N to left side of C. In L.XV, L on much higher plane than XV. Period high and about midway. Small chip break below left ribbon. L and X lean slightly left. "A" mintmark leans slightly left.

Reverse E: Same as previously described.



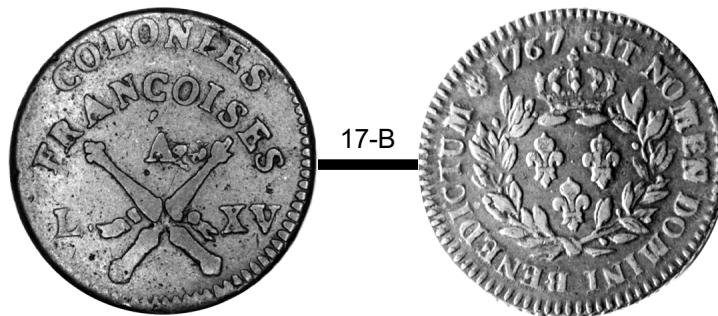
VARIETY 15-I Obverse 15: In COLONIES, 1st O is close to C, is slightly high and leans left. 2nd O is slightly below the baseline of L and N, and I is slightly closer to N. In FRANÇOISES, FR close with F leaning slightly left. A is slightly high, O is slightly closer to C. E is slightly closer to 1st S. and 2nd S leans right. In L.XV, L leans slightly left, the period is high and closer to the arms. The X is slightly lower than the V which leans slightly left. The left leg of the "A" mintmark is lower than the right leg.

Reverse I: Same as previously described.



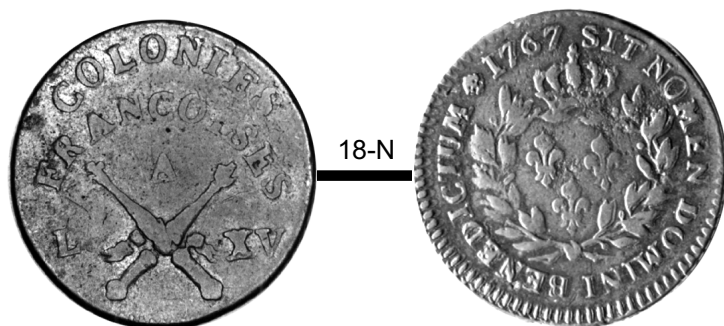
VARIETY 16-F Obverse 16: In COLONIES, 1st O is slightly closer to L, I is closer to N and almost parallel with N. Break connects end of beginning of loop of last S to center of S. In FRANÇOISES, F leans slightly left, N leans left. SES on higher plane than FRANCOI, with base of E higher than base of both S's. "A" mintmark is well centered with the accent over the left side of the A. In L.XV, L leans very slightly left, period is well centered or perhaps just slightly closer to the arms. The XV is well spaced with the right upright of the V lower than the left upright.

Reverse F: Same as previously described.



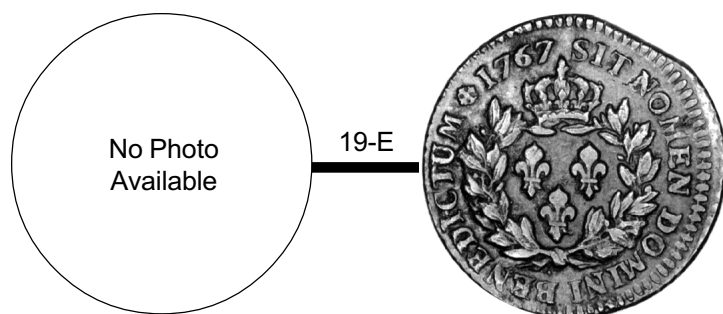
VARIETY 17-B Obverse 17: In COLONIES, C is low, leans right, and is close to O. L is high, leans right, and is closer to 2nd O. I is slightly closer to N, and S leans right. In FRANÇOISES, letters very uneven. N leans left, CO leans right and is low, I is high, and base of S's are low. The cedilla below C is well over the left side of the "A" mintmark. In L.XV, the period is high and closer to the arms. The base of X is very close to the arms and almost does touch. V appears recut and extends below the base of X. Chip breaks occur between the right side of the "A" mintmark and the arms.

Reverse B: Same as previously described, except an earlier die state.



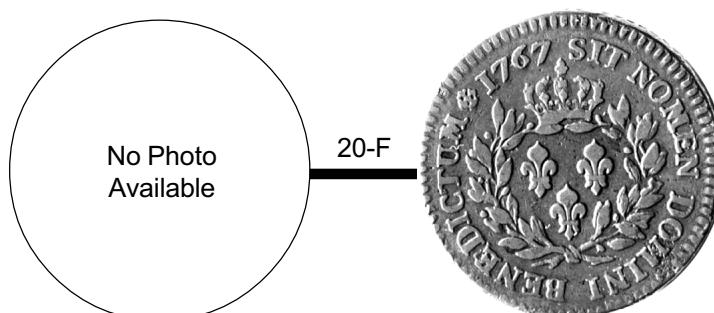
VARIETY 18-N Obverse 18: In COLONIES, I closer to N, E low, S leans right. In FRANÇOISES, F leans left, R leans right, C is low, 1st S high and leans right, last S high and leans right. In L. XV, L is high and leans left, period closer to L. X leans left and probably fills in across top half. "A" mintmark well centered and leans left, with accent directly under C and closer to C than "A."

Reverse N: In SIT, I leans left and is closer to S. In NOMEN, ME slightly higher. In DOMINI, MI touch on bottom, final I high. In BENEDICTUM, 2nd E leans right, I is high, TU is parallel and touch, M slightly high and leans right. Leaf ends under left center of 1 which leans left. Top of crown much closer and almost touches S. and ends 1/4 height of letters. Filling in occurs around letters, especially I of SIT and between wreath and U. Final 7 of date shows recutting.



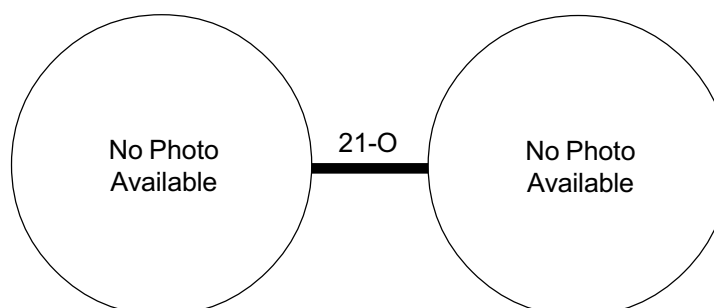
VARIETY 19-E Obverse 19: In COLONIES, C is low and leans right with top of C closer to O than bottom. L leans right and closer to 2nd O, which is closer to L than N. I slightly high. In FRANÇOISES, F is low, R high and leans right. 1st S leans right compared to I. Base of E is slightly high. In L. XV, the L and period on a higher plane than XV. Period midway between L and arms. L leans left, X probably filled in. Diagnostic webbing appears in the C's. A break connects the center and lower serif of the E's, and the center and upper serif of the F. Tiny break may appear before the C of COLONIES.

Reverse E: Same as previously described.



VARIETY 20-F Obverse 20: In COLONIES, 1st O slightly low and leans right. L closer to 2nd O. I slightly closer to N. E low and closer to S. Last S appears larger than other letters. In FRANÇOISES, F is low, R leans right. RAN more apart than other letters. N slightly high, C slightly low, last S slightly high. Top of arms almost touch E. In L.XV, not clear. "A" mintmark well centered and leaning very slightly left.

Reverse F: Same as previously described.



VARIETY 21-O Obverse 21: In COLONIES, 2nd O slightly high. I slightly closer to N and almost parallel with N. E leans right. In FRANÇOISES, N leans left, E leans right and is defective along the bottom with the lower arm thin and sloping up to the right. 2nd S appears larger and leans right. In L.XV, the L and period are on a lower plane than XV. The L leans left and the period is very slightly closer to the arms. The "A" mintmark is well centered with the accent over the left side.

Reverse O: In SIT, I and T respectively lower and the I is closer to S. The T is defective along the bottom. In NOMEN, O low and closer to N. In DOMINI, MI connected at the base, last I slightly high and leans left. In BENEDICTUM, base of 1st E above B and N. ED connected at base. I is high, T leans left and is defective along its bottom. Leaf ends under left center of 1. Top of crown much closer to S and ends 1/3 height of S. Tiny chip break above I of SIT. Breaks occur around EN and DO of DOMINI.

Counterstamps																
Variety No.	No C/S	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1 - A	●	●	●	●	●	●		●	●	●	●		●		●	●
2 - B	●	●	●	●	●	●	●				●					●
3 - C	●	●	●	●	●	●		●	●		●	●		●		●
4 - D		●	●		●			●		●						
5 - E	●	●	●		●	●	●	●			●					
6 - F	●															
7 - G	●															
7 - N	●															
8 - H	●															
9 - I	●															
10 - J	●															
11 - K	●															
12 - L				●												
13 - M	●															
14 - E	●				●											
15 - I	●															
16 - F	●				●											
17 - B	●															
18 - N	●															
19 - E				●	●											
20 - F	●															
21 - O	●															

Figure 1: Known French Colonies 1767 sou die marriages and RF counterstamp combinations.

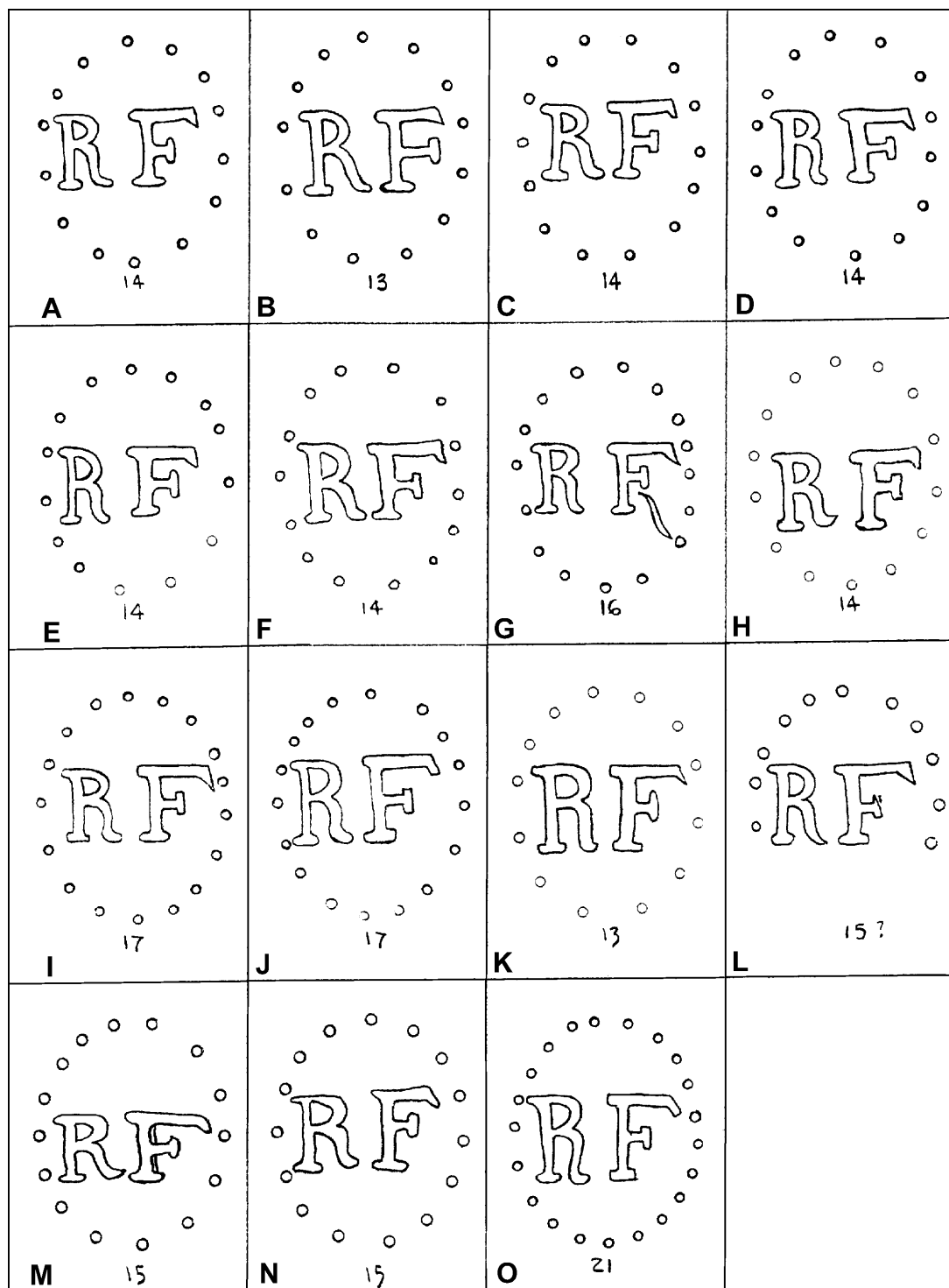


Figure 2: Diagrammed RF counterstamp patterns.